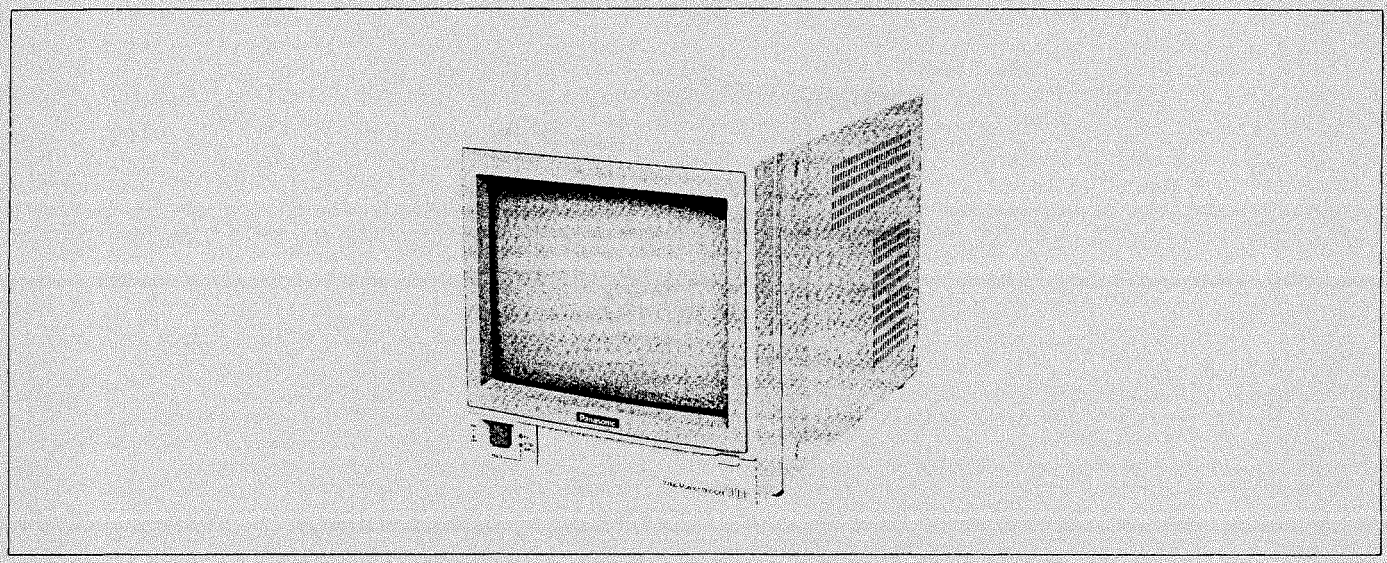
58455

ORDER NO. AV69103449C8

Service Manual

Colour Video Monitor

WV-CM1000



SPECIFICATIONS

Power source:	WV-CM1000/A, WV-CM1000/B, WV-CM1000/G: 100 - 240V AC 50/60Hz
Power Consumption:	Approx. 49 watts
Video Input/Output:	1.0/Vp-p composite/75Ω or Hi-Z looping through
Sweep Linearity:	Less than 5%
Sweep Geometry:	Less than 2%
Scanning size:	Approx. 8% (Overscanning)
CRT:	254mm (10") diagonal
Diagonal actual visual size:	222.9mm (9")
Audio Input/Output:	−10dB/Hi-Z
Switchable AFC Speed:	SHORT/LONG
Ambient Operating Temperature:	−10°C - +50°C (14°F - 122°F)
Ambient Operating Humidity:	Less than 90%
Dimensions:	220 (W) × 230 (H) × 315 (D) mm
Weight:	7.4kg

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

OPTIONAL ACCESSORY

Rack Mount Kit WV-Q52E

Panasonic

For Australia

THIS APPARATUS MUST BE EARTHED.

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For U.K.

PLEASE READ FOLLOWING INSTRUCTION IF YOUR POWER SOURCE VOLTAGE IS MORE THAN 200V.

WARNING

THIS APPARATUS MUST BE EARTHED.
IMPORTANT
The wires in this mains lead are coloured in accordance with the following code.

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

This model conforms to the EC directive (for radio interference) 87/308/EEC.

This apparatus was produced to BS 800:1987.

The serial number of this product may be found on the bottom of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. WV-CM1000

Serial No. _____

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

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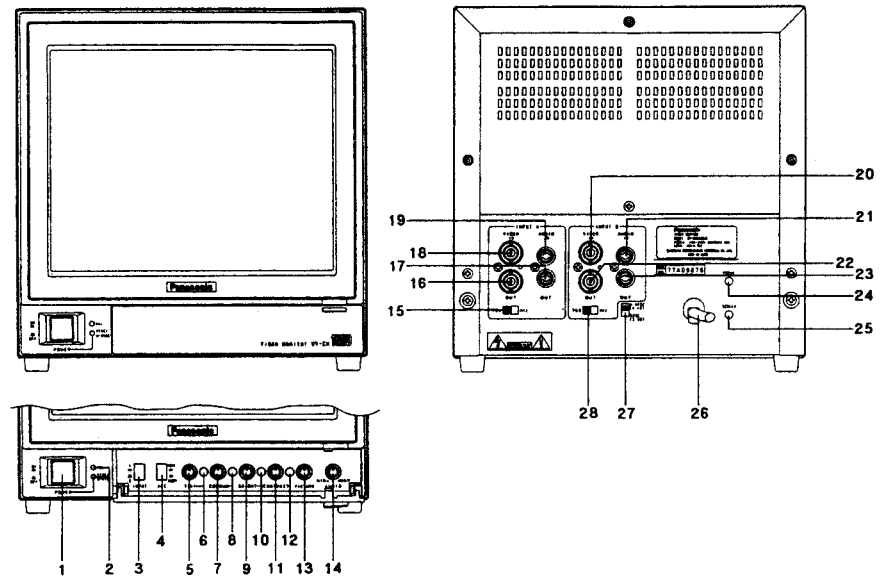
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS



1. **Power Switch (POWER)**
This is a push-push type switch which turns the power of the monitor on and off.
Press once and the switch remains down (▬) for turning on the power of monitor.
Press again, the switch comes up (▮) for turning off the power of the monitor.

2. **Power Indicator/Broadcast System Indicator (PAL, NTSC/M-NTSC)**
When turning on the power of this monitor without any input signals, PAL LED indicator lights in red.
These indicators are switched by the difference in the broadcasting system connected to this monitor

3. **Input Signal Select Switch (INPUT A/B)**
This is a push-push type switch which selects the signal input to A or B.
Press once and the switch remains down (▬) for selecting the INPUT A signal.
Press again, the switch comes up (▮) for selecting the INPUT B signal.

4. **AFC Time Selection Switch (AFC, LONG/SHORT)**
This is a push-push type switch which selects the AFC time. Press once and the switch remains down (▬) for selecting the long horizontal (LONG). Press again, the switch comes up (▮) for selecting the short horizontal (SHORT).
The short horizontal (SHORT) should be selected for the input signal, such as VTR playback.

5. **Tint Control (TINT)**
Turn this control clockwise for purplish colour of the picture and turn this counterclockwise for greenish colour of the picture.

6. **Tint Subcontrol**
This control is preset at the factory.

7. **Colour Control (COLOUR)**
Turn this control clockwise to increase the picture colour.

8. **Colour Subcontrol**
This control is preset at the factory.

9. **Bright Control (BRIGHT)**
Turn this control clockwise to increase the picture brightness.

10. **Bright Subcontrol (BRIGHT)**
This control is preset at the factory.

11. **Contrast Control (CONTRAST)**
Turn this control clockwise to increase the picture contrast.

12. **Contrast Subcontrol**
This control is preset at the factory.

13. **Picture Adjustment (PICTURE)**
Turn this control clockwise for sharp picture and turn this control counterclockwise for soft picture.

14. **Audio Volume (AUDIO, MIN/MAX)**
The audio level can be adjusted by turning this volume.

15. **Video Termination Switch (INPUT A - 75Ω/HI-Z)**
When bridging or looping through the video signal, set this switch to Hi-Z position, and other cases this switch should be set to 75 Ω position.

16. **Video Output Connector (INPUT A - VIDEO OUT)**
The video input signal connected to the Video Input Connector (18) is looped through to this connector.

17. **Audio Output Connector (INPUT A - AUDIO OUT)**
The audio input signal connected to the Audio Input Connector (19) is looped through to this connector.

18. **Video Input Connector (INPUT A - VIDEO IN)**
This input accepts a composite PAL/NTSC/M-NTSC video signal.

19. **Audio Input Connector (INPUT A - AUDIO IN)**
−10dB/Hi-Z audio signal can be supplied to this input connector.

20. **Video Input Connector (INPUT B - VIDEO IN)**
This input accepts a composite PAL/NTSC/M-NTSC video signal.

21. **Audio Input Connector (INPUT B - AUDIO IN)**
−10dB/Hi-Z audio signal can be supplied to this input connector.

22. **Video Output Connector (INPUT B - VIDEO OUT)**
The video input signal connected to the Video Input Connector (20) is looped through to this connector.

23. **Audio Output Connector (INPUT B - AUDIO OUT)**
The audio input signal connected to the Audio Input Connector (19) is looped through to this connector.

24. **Focus Control (FOCUS)**
This control is preset at the factory.

25. **Screen Control (SCREEN)**
This control is preset at the factory.

26. **Power Cord**

27. **NTSC/M-NTSC Selection Switch (NTSC/M-NTSC)**
When connecting a VTR providing the modified NTSC (4.43 MHz NTSC) signal to this monitor, set this switch to M-NTSC position.
When connecting a camera or VTR providing NTSC (3.58 MHz NTSC) signal to this monitor, set this switch to NTSC position.
The selection between PAL and M-NTSC/NTSC mode is performed automatically.

28. **Video Termination Switch (INPUT B, 75Ω/HI-Z)**
When bridging or looping through the video signal, set this switch to Hi-Z position, and other cases this switch should be set to 75 Ω position.

CABLE INFORMATIONS

Power Cable

1. Keep the Power Switch (1) in the OFF position during installation.
2. Connect the Power Cord to a grounded electrical outlet.

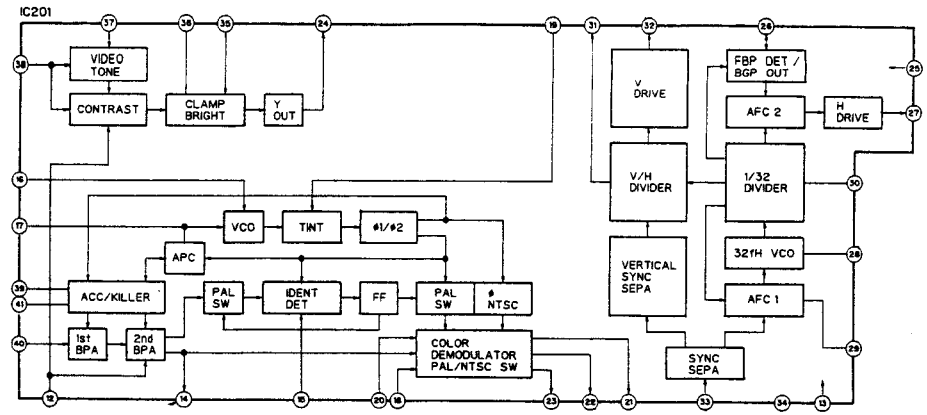
Video Cable

1. Use 75-ohm coaxial cable. [RG-59/U (3C-2V), RG-6/U (5C-2V), RG-14/U (7C-2V), RG-15/U (10C-2V)]
2. Up to 10 monitors can be hooked up in this configuration before signal loss occurs. Total cable length should not exceed 150m (500 feet).
3. Wiring Precautions:
   - Do not bend coaxial cable into a curve whose radius is smaller than 10 times of its diameter:
   - Never crush or pinch the cable.

   All these will change the impedance of the cable and cause poor picture quality.

Type of coaxial cable		RG-59/U (3C-2V)	RG-6U (5C-2V)	RG-11/U (7C-2V)	RG-15/U (10C-2V)
Recommended maximum cable length	(m)	250	500	600	800
	(ft)	825	1,650	1,980	2,840

PIN IDENTIFICATION



Pin Identification (LA7680)

Pin NO	Symbol	Description
1.	FM DET	FM Detector output
2.	FM DISCRI	FM Discriminator Mute
3.	N.F.B	Negative Feed Back
4.	AF IN	Audio frequency IN
5.	AF OUT	Audio frequency OUT
6.	GND	Ground
7.	VIF AMP	VIF Amplifier
8.	VIF AMP	VIF Amplifier
9.	RF ACC	Not Used
10.	AGC F	AGC Filter
11.	VCC	Not Used
12.	CONTRAST	Contrast Control/Burst Cleaning
13.	VCC	Not Used
14.	CHROMA	Chroma Out
15.	ID	Ident Filter
16.	X-TAL	X-Tal
17.	APC F	APC Filter
18.	B-Y IN	B-Y In
19.	TINT	Tint control
20.	R-Y IN	R-Y In
21.	R-Y OUT	R-Y Out
22.	G-Y OUT	G-Y Out
23.	B-Y OUT	B-Y Out
24.	Y OUT	Y Out
25.	HOR VCC	Hor Vcc
26.	BGP OUT/FBP IN	Burst Gate Pulse Out/Flyback Pulse In
27.	HOR OUT	Hor Out
28.	X-TAL	X-Tal
29.	AFC I F	Automatic Frequency Control IF
30.	H COIN F	Horizontal coin F
31.	50/60	50Hz/60Hz
32.	VER OUT	Vertical Out
33.	SYNC SEP IN	Sync separation in
34.	GND	Ground
35.	BRIGHT	Bright Control
36.	CLAMP F	Pedestal Clamp
37.	VIDEO TONE	Video Tone Control
38.	VIDEO IN	Video Input
39.	ACC KILLER	Acc/Killer Filter
40.	CHROMA IN/COLOUR	Chroma In/Colour Control
41.	ACC KILLER F	Acc/Killer Filter
42.	VIDEO OUT	Video Output
43.	AFT COIL	AFT Coil
44.	AFT OUT	AFT Out
45.	SIF IN	SIF Input and D.C ATT
46.	RF AGC	RF AGC Out
47.	VIDEO DET	Video Defector
48.	VIDEO DET	Video Detector

1. TEST EQUIPMENT REQUIRED

The following equipment is required for adjustment of WV-CM1000A Video Monitor.

- Oscilloscope
- Color TV signal generator
- Digital voltmeter
- Degaussing coil
- Completely aligned Color Camera
- Logarithmic Gray scale chart (Part NO YWV230RB99)
- Resolution chart

2. DISASSEMBLY PROCEDURE FOR ADJUSTMENT

- Remove nine screws holding the cover and remove the cover by pulling it backward. (Fig. 2-1)

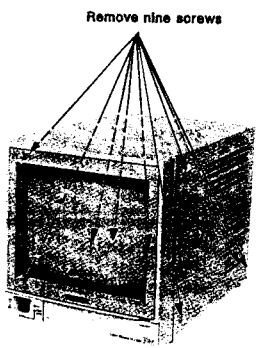


Fig. 2-1

3. REPLACEMENT PROCEDURE

CRT Replacement

- Remove the cover as previously described in Section 2.
- Remove four screws holding the printed circuit board (PCB) and slide back the PCB unit. (Fig. 3-1)
- Disconnect the anode cap.

  WARNING: Make sure that the anode voltage is completely discharged by directly connected between anode terminal and chassis.

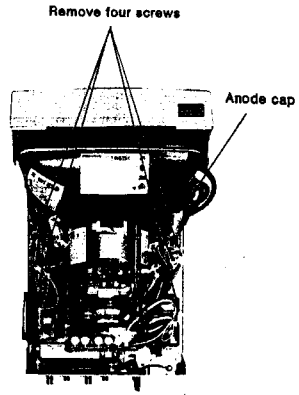


Fig. 3-1

- Disconnect the CRT socket board by pulling it backward. (Fig. 3-2)
- Remove four screws holding CRT and remove CRT.
- Remove deflection yoke shield cover.
- Loosen the screws holding deflection yoke and purity, convergence magnets assy and remove the yoke and magnets assy by pulling them backward.

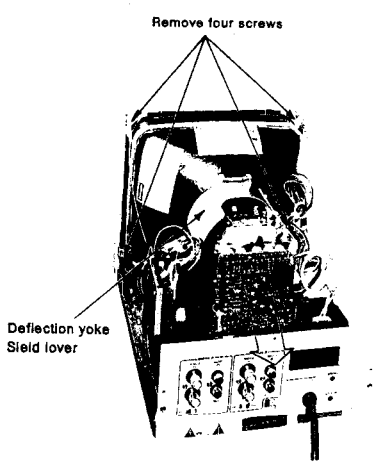


Fig. 3-2

4. ADJUSTMENT PROCEDURE

4-1 Connection and Setting Up for Adjustment

4-1-1 Connection

- Connect the coaxial cable between the VIDEO OUTPUT terminal of Colour Camera and CAMERA INPUT connector of Colour Video Monitor WV-CM1000.
- Connect the coaxial cable between VIDEO OUTPUT connector of TV signal generator and VIDEO INPUT connector of colour Video Monitor WV-CM1000.

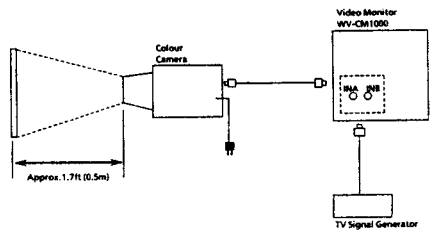


Fig. 3-3

4-1-2 Disassembling

- Disassemble the Video Monitor WV-CM1000 according to Section 2 DISASSEMBLY PROCEDURE FOR ADJUSTMENT on page.

4-1-3 Position of Controls and Switches

- Set the controls and switches on the Video Monitor as follows;

Power ON/OFF switch	ON position
Colour control	Center (Click) position
Colour Subcontrol	Center Position
Contrast control	Center (Click) position
Contrast Subcontrol	Center Position
Bright control	Center (Click) position
Bright Subcontrol	Center Position
Picture adjustment	Center Position
Service switch (SW701) on the CRT socket board	Center (NOR) position

4-2 Adjustment Procedure

(1) Focus coarse adjustment

Adjust :	FOCUS	FLYBACK TRANSFORMER Main board
Observe :	Video Monitor	

- Supply the dots signal to VIDEO INPUT connector of video Monitor.
- While observing Video Monitor, adjust FOCUS control so that the dots on the CRT screen become as small/clear as possible.

(2) Screen cutoff adjustment

Adjusts :	(SCREEN)	(FLYBACK TRANSFORMER) Main board
	VR204 (R CUTOFF)	CRT socket board
	VR202 (B CUTOFF)	CRT socket board
Observe :	Video Monitor	

- Supply the white raster signal to the VIDEO INPUT connector of Video Monitor.
- Set the service switch SW701 on the CRT socket board to SERVICE position.
- Turn VR703 (R CUTOFF), VR704 (G CUTOFF) and VR705 (B CUTOFF) fully counterclockwise.
- While observing Video Monitor, adjust SCREEN so that the green horizontal line just appears on the CRT screen.
- While observing Video Monitor, adjust VR703 (R CUTOFF), VR704 (G CUTOFF) and VR705 (B CUTOFF) for same level/brightness as white line.
- Reset service switch SW701 to normal (NOR) position.

(3) Purity adjustment

Adjust :	Purity magnet assy
Observe :	Video Monitor

- Remove the shield cover for deflection coil for easy adjustment.
- Remove three DY wedge for holding the position of deflection coil.
- Supply the white raster signal to the VIDEO INPUT connector of Video Monitor.

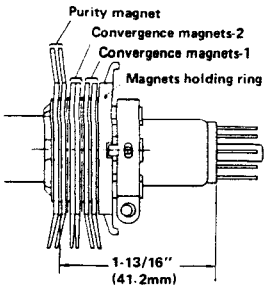


Fig. 4-2-1

- Loosen the holding screw of deflection coil and move back the coil until it reaches to the magnet assy. (Fig. 4-2-2)

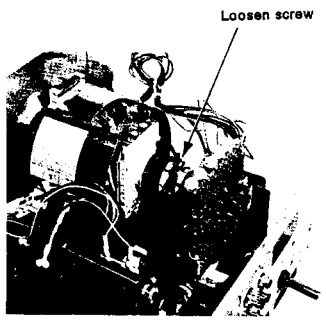


Fig. 4-2-2

- Degauss the CRT using degaussing coil.
- Loosen magnet holding ring (Fig. 4-2-3) by turning it approximately 90° counterclockwise.

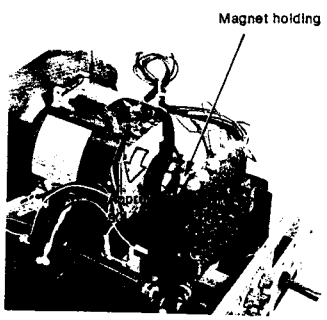


Fig. 4-2-3

- While observing Video Monitor, adjust purity magnets (Fig. 4-2-3) so that the red area positions at center of CRT screen. (Fig. 4-2-4)

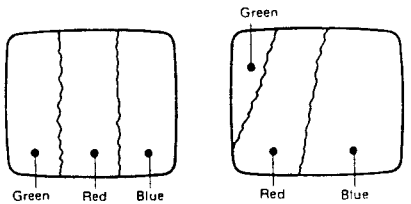


Fig. 4-2-4

- While observing Video Monitor, move deflection coil forward until red colour fully occupies the screen and tighten the holding screw. (Fig. 4-2-4)
- The magnet holding ring will be fastened after completing next step.

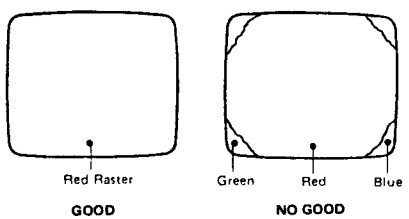


Fig. 4-2-5

(4) Convergence adjustment

Adjusts :	Convergence magnets-1	Magnet Assy
	Convergence magnets-2	Magnet Assy
Observe :	Video Monitor	

- Remove the shield cover for deflection coil.
- Remove the three DY wedge on the CRT, which hold the position of deflection coil.
- Supply the dots signal to VIDEO INPUT connector of Video Monitor.
- Loosen magnets holding ring (Fig. 4-2-4) by turning it approximately 90° counterclockwise, as previous step.
- Connect the TP709 and test pin of R + B on the CRT socket board by cable.
- While observing Video Monitor, adjust convergence magnets-1 (Fig. 4-2-2) so that the Red and Blue dots on the center area of CRT screen is overlapped.
- Disconnect the TP709 and test pin of R + B.
- While observing Video Monitor, adjust convergence magnets-2 (Fig. 4-2-2) so that Green and Magenta (Red + Blue) dots on the center area of CRT screen is overlapped, that is, dots become white.
- Change the signal to crosshatch signal from dots signal.
- While observing Video Monitor, adjust convergence for corner of CRT by shift the front portion of deflection coil vertically, horizontally or diagonally and hold the deflection coil using three DY wedge.
- Fasten magnets holding ring.

(5) Subcontrast and subbright adjustment

Test point :	TP702	CRT socket board
Adjust :	VR200-3 (SUBCONTRAST)	Main board
	VR200-5 (SUBBRIGHT)	Main board
	VR701 (R DRIVE)	CRT socket board
	VR703 (B DRIVE)	CRT socket board

- Supply the stairstep signal to the VIDEO INPUT connector of Video Monitor.
- Turn VR200-4 (CONTRAST) fully clockwise to maximum position and VR200-6 (BRIGHT) to their mechanical center position.
- Connect the oscilloscope to TP702 (G) on the CRT Socket.
- Adjust VR200-3 (SUBCONTRAST) so that the blanking level to the top step of negative stairstep signal is 40Vp-p. (Fig. 4-2-6)

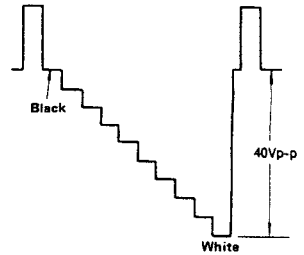


Fig. 4-2-6

- Connect the oscilloscope to TP701 (R) on the CRT Socket.
- Adjust VR701 (R DRIVE) so that the blanking level to the top step of negative stairstep signal is 40Vp-p.
- Connect the oscilloscope to TP703 (B) on the CRT Socket.
- Adjust VR703 (B DRIVE) so that the blanking level to the top step of negative stairstep signal is 40Vp-p.
- Turn VR200-4 (CONTRAST) AND VR200-6 (BRIGHT) to their mechanical center position.
- Adjust VR200-5 (SUBBRIGHT) so that the 2 steps from the black are suppressed to black colour while observing the monitor screen. (Fig. 4-2-7)
- Turn VR200-4 (CONTRAST) fully clockwise to maximum position and VR200-6 (BRIGHT) to mechanical center position
- Confirm that the TP2 (G) of blanking level to the top step of negative stairstep signal is 40Vp-p

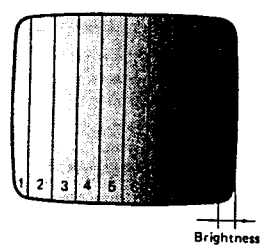
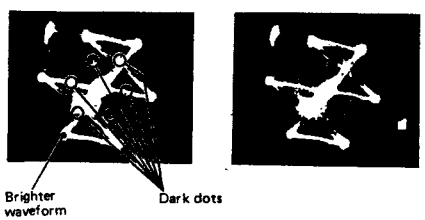


Fig. 4-2-7

(6) Chroma and delay adjustment

Test points :	TP713 (B-Y)	Main board
	TP711 (R-Y)	Main board
Adjusts :	VR210	Main board
	(CHROMA PHASE)	
	VR	Power/Monitor board
	(CHROMA GAIN)	
	L7	Power/Monitor board
	(DL MATCHING)	

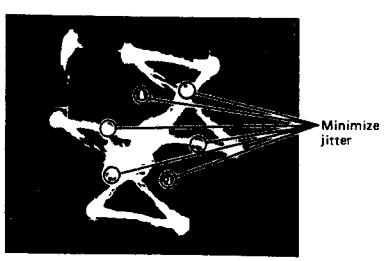
- Supply the colour bar signal to the VIDEO INPUT connector of Video Monitor.
- Turn VR200-2 (PICTURE) fully counterclockwise position, VR200-4 (CONTRAST) and VR200-6 (BRIGHT) to their mechanical center position.
- Set the oscilloscope to the X-Y functional mode.
- Connect the X probe of oscilloscope to TP713 (B-Y) and the Y probe to TP711 (R-Y)



GOOD NO GOOD

Fig. 4-2-7

- While observing oscilloscope, adjust VR210 (CHROMA PHASE) so that the brighter waveform and dark dots are roughly coincided. (Fig. 4-2-8)



GOOD

Fig. 4-2-8

NO GOOD NO GOOD

Fig. 4-2-9

- Adjust T201 (DL MATCHING) so that the brighter waveform is coincided. (Fig. 4-2-10)

GOOD NO GOOD

Fig. 4-2-10

- Adjust L208 (BURST COIL) so that the brighter waveform is coincided. (Fig. 4-2-11)

GOOD NO GOOD

Fig. 4-2-11

- Repeat adjusting VR7, VR8 and L7 so that the brighter waveform is coincided and jitter of dark dots are minimized.

(7) Sub color adjustment

Test point : TP713 (B-Y) CRT SOCKET
Adjust : VR200-7 CRT SOCKET
(SUB COLOR)

- Supply the color bar signal to the VIDEO INPUT connector of Video Monitor.
- Turn VR200-8 (COLOR), VR200-4 (CONTRAST) and VR200-6 (BRIGHT) to center position.
- Set the oscilloscope to the normal mode.
- Connect the oscilloscope to TP713 (B-Y) on the CRT Socket board.
- Adjust VR200-7 (SUB COLOR) so that the waveform becomes 0.65V. (Fig. 4-2-12)

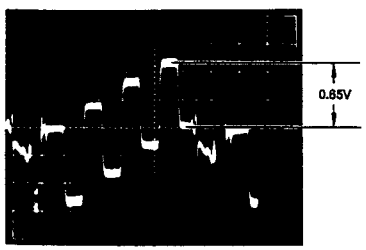


Fig. 4-2-12

(8) White balance adjustment

Adjusts : VR703 (R CUTOFF) CRT socket board
VR705 (B CUTOFF) CRT socket board
VR701 (R DRIVE) CRT socket board
VR702 (B DRIVE) CRT socket board
Observe : Video Monitor

- Supply the white raster signal to the VIDEO INPUT connector of Video Monitor.
- While observing Video Monitor, adjust VR701 (R DRIVE), VR702 (B DRIVE), VR703 (R CUTOFF) and VR705 (B CUTOFF) so that the raster on the CRT screen is white.

(9) H.centering, V.centering, V. size, H.size adjustment

Adjusts : VR401 (H.CENTERING) Main board
VR502 (V.CENTERING) Main board
VR501 (V.SIZE) Main board
L603 (H.SIZE) Main board
Observe : Video monitor

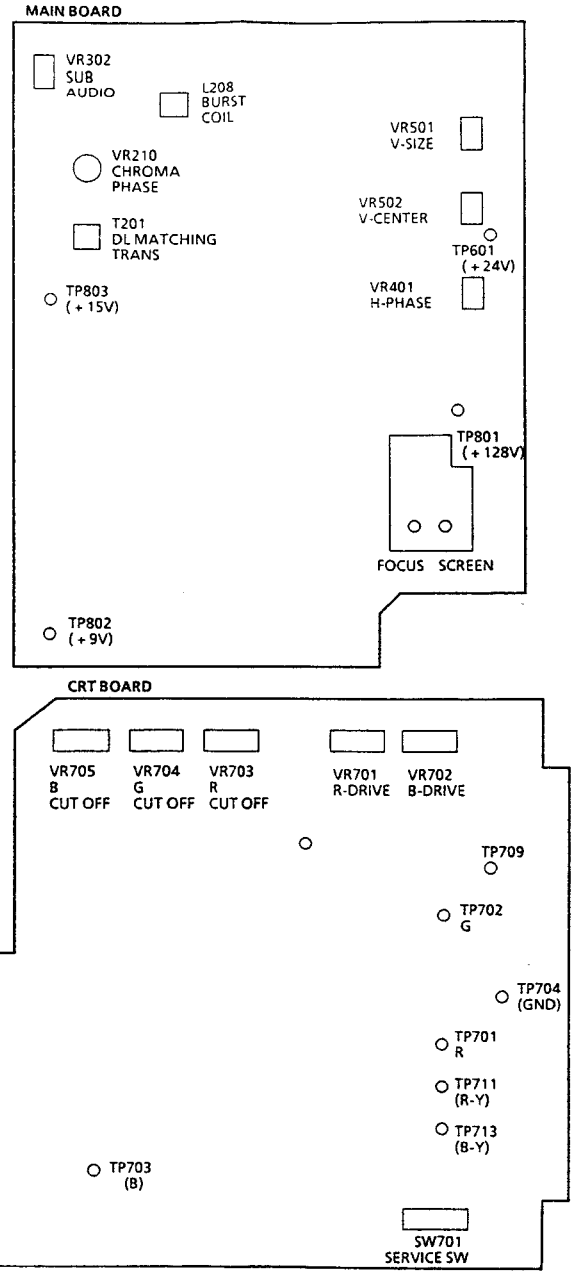
- Connect the completely aligned color camera to the CAMERA INPUT connector of Video Monitor WV-CM1000.
- Aim the camera at the resolution chart (YWV1400RB99) so that the arrows of the chart touch to the edge of the raster on the underscanned color video monitor connected to the VIDEO OUT connector of WV-CM1000.
- Adjust VR501 (V.SIZE) and L603 (H.SIZE) so that the circle of the resolution chart on the WV-CM1000 monitor screen becomes true circle.
- Adjust VR 401 (V. CENTERING) and VR502 (H.CENTERING) so that the center of the resolution chart positions on the center of the monitor screen.

(10) Focus fine adjustment

Adjust : FOCUS Main board
(FLYBACK TRANSFORMER)
Observe : Video Monitor

- Supply the dots signal to the VIDEO INPUT connector of Video Monitor.
- While observing Video Monitor, adjust FOCUS so that the dots on the CRT screen are as small/clear as possible.

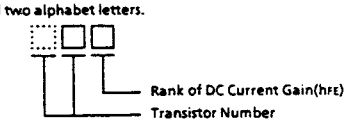
LOCATION OF TEST POINTS AND ADJUSTING CONTROLS



CHIP COMPONENTS

1. Chip Transistor

The transistor number is indicated on the top surface of the chip transistor using two alphabet letters or one numerical and two alphabet letters.



Transistor Number

(Chip Transistor)

Letter	Transister No.	Letter	Transister No.
A	2SB709	X	2SD602A
B	2SB709A	Y	2SD601
C	2SB710	Z	2SD601A
D	2SB710A	1A	2SB799
E	2SA1022	1B	2SB814
F	2SA1034	1C	2SB902
H	2SA1035	1F	2SK321
I	2SB792	1K	2SK316
K	2SC2778	1L	2SK247
P	2SD814	1M	2SJ84
Q	2SD813	1N	2SK199
R	2SC2480	1O	2SK198
S	2SC2405	1T	2SC3077
T	2SC2406	1X	2SC2845
U	2SC2404	1Z	2SD1030
V	2SC2295	2B	2SK374
W	2SD602	2C	2SK116

(Small Chip Transistor)

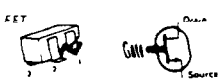
Letter	Transister No.
A	2SB1218
U	2SC3931
W	2SD1820
Y	2SD1819
E3	2SA1226
OS	2SB1219
UC	2SA1532
YU	2SC3938

(Pair Transistor)

Letter	Transister No.
5C	XN4601
5N	XN6501
5O	XN6401

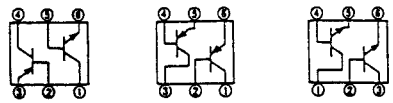
Example : WQ ⟶ 2SD602 - Q
YQ ⟶ 2SD601 - Q
1BS ⟶ 2SB814 - S

Appearance and Symbols



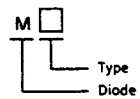
	1	2	3
Except 2SK199	Drain	Source	Gate
2SK199	Gate	Drain	Source

XN4601 XN6401 XN6501



2. Chip Diode

The diode number is indicated on the top surface of the chip diode using Two alphabet letters.



Diode Number

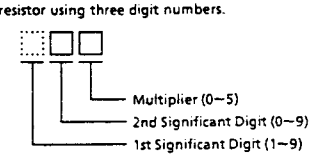
Letter	Diode No.	Letter	Diode No.
MA	MA151A	MI	MA152K
MB	MA152A	MK	MA28W-B
MC	MA153	ML	MA28T-A
MD	MA28-A	MN	MA151WA
ME	MA28-B	MO	MA152WA
MF	MA28W-A	MT	MA151WK
MH	MA151K	MU	MA152WK

Appearance and Symbols

	1	2	3
MA28/MA28W/MA28T	-	Anode	Cathode
MA151K/MA152K	-	Anode	Cathode
MA151A/MA152A	-	Cathode	Anode
MA151WK/MA152WK	Anode	Anode	Cathode
MA151WA/MA152WA	Cathode	Cathode	Anode
MA153	Cathode	Anode	Common

3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.



Example : 330 ⟶ $33 \times 10^0 = 33$ ohms
561 ⟶ $56 \times 10^1 = 560$ ohms
123 ⟶ $12 \times 10^3 = 12$ ohms

Note : Zero ohm resistor (jumper chip) is colored red or green.

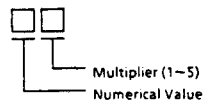
4. Chip Capacitor

The capacitive value of replacement chip capacitors is indicated on the bottom surface. Original parts do not have value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

Example : 0.5 ⟶ 0.5 pF 2.5 ⟶ 2.5 pF
75 ⟶ 0.75 pF 33 ⟶ 33 pF
1 ⟶ 1 pF 82 ⟶ 82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.



Numerical Value

Letter	Value	Letter	Value
A	10	N	33
B	11	P	36
C	12	O	39
D	13	R	43
E	15	S	47
F	16	T	51
G	18	U	56
H	20	V	62
J	22	W	68
K	24	X	75
L	27	Y	82
M	30	Z	91

*Letters I and O are not used

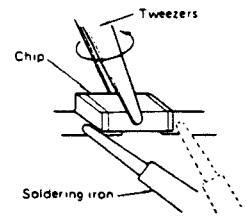
Example : A1 ⟶ $10 \times 10^1 = 100$ pF
N2 ⟶ $33 \times 10^2 = 3300$ pF
S3 ⟶ $47 \times 10^3 = 47000$ pF

5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip beyond 3 seconds.
9. Maintain temperature control under 260°C (500°F) when soldering.

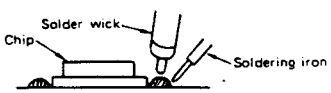
5-1 Removal (Transistor, Diode, Resistor and Capacitor)

1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the soldering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning it with tweezers.
   Note : Be careful not to damage other chips.

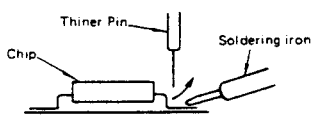


5-2 Removal (IC)

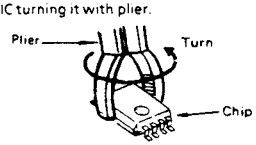
1. Add the solder wick and solder iron to each lead of the IC and remove solder.



2. Add the solder iron to each lead of the IC and left each lead of the IC using thiner pin.

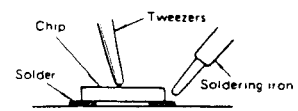


3. Remove IC turning it with plier.

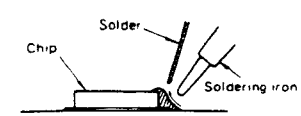


5-3 Mounting

1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.



3. Solder both ends of chip (three leads for chip transistor).



BLOCK DIAGRAM OF COLOUR VIDEO MONITOR WV-CM

JACK BOARD

MAIN BOARD

SW13 NTSC/M-NTSC SELECTION SWITCH

SW11, 12 VIDEO TERMINATION SWITCH

VIDEO: A IN, A OUT, B IN, B OUT

AUDIO: A IN, A OUT, B IN, B OUT

SW12

SW11

SW101 INPUT SIGNAL SELECT SWITCH

Q101-103 SWITCH

IC101 (1/2)

IC101 (2/2)

Q206 Q207 AMP

VR302 AUDIO SUBVOLUME

VR200-1 AUDIO VOLUME

IC301 AUDIO OUTPUT | DC VOL ATT

CN301

SP1

CF201 1H DELAY

Q210 BUFFER

Q211 BUFFER

Q201-203 NTSC/PAL SWITCH

Q209 BUFFER

VR200-7 COLOR SUBCONTROL

VR200-8 COLOR CONTROL

Q212 NTSC/PAL SW

IC501

VERTICAL SIZE CONTROL SWITCH

THERMAL PROTECTION

V TRIG. IN 1 SHOT MULTI.

RAMP GENE.

V DRIVE

V OUTPUT

VR501 VERTICAL SIZE

Q501 V SIZE SWITCH

VR502 VERTICAL CENTER

VR200-2 PICTURE ADJUSTMENT

VR200-6 BRIGHT CONTROL

VR200-5 BRIGHT SUBCONTROL

IC201

VIDEO TONE CONTRAST

CLAMP BRIGHT

Y OUT

Q204 BUFF.

VR200-10 TINT CONTROL

VR200-9 TINT SUBCONTROL

Q213, 214 NTSC/PAL SW

Q402 H. PHASE SWITCH

VR401 HORIZONTAL PHASE

X202 (3.58MHz)

X201 (4.43MHz)

VCO

TINT

φ1/φ2

APC

ACC/KILLER

PAL SW

IDENT DET

FF

PAL SW / φ NTSC

1st/2nd BPA

COLOR DEMODULATOR PAL/NTSC SW

L205, T201 1H DELAY

Q205 NTSC/PAL SW

VR200-4 CONTRAST CONTROL

VR200-3 CONTRAST SUBCONTROL

VR210 CHROMA PHASE

V DRIVE

V/H DIVIDER

V SYNC SEPA

SYNC SEPA

FBP DET/BGP OUT

AFC 2

H DRIVE

1/32 DIVIDER

32fH VCO

AFC 1

CF203

L1 DEGAUSSING COIL

AC100-240V

F801

SW801 POWER SWITCH

D801

SW801 SWITCHING POWER T.

TP801 (128V)

F802

+128V

TP803 (15V)

F824

+15V

IC801

SWITCHING REGULATOR

Q803 Q804 X-PROTECT DRIVE

Q802 +9V REG.

TP802 (9V)

+15V

+9V

LED BOARD

D901 PAL/POWER INDICATOR

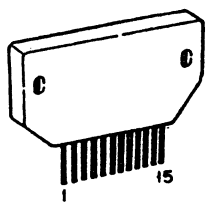
D902 NTSC/M-NTSC INDICATOR

Q806 DRIVE

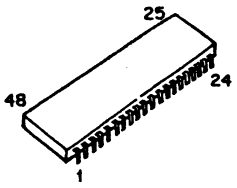
Q805 DRIVE

APPEARANCE OF IC, TRANSISTOR AND DIODE

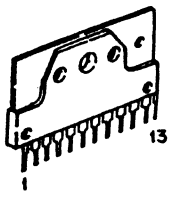
STK7308



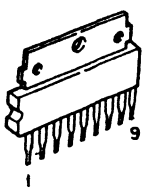
LA7680



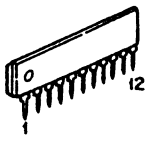
LA7837



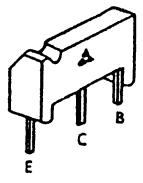
AN5265



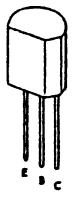
LA7222



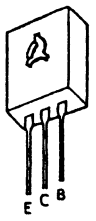
2SD636-RS
2SB641-RS



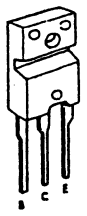
2SC2271E
2SD1207-STU



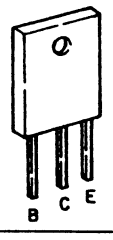
2SC3503E



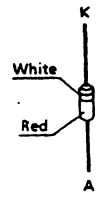
2SD1266



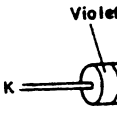
2SD1541



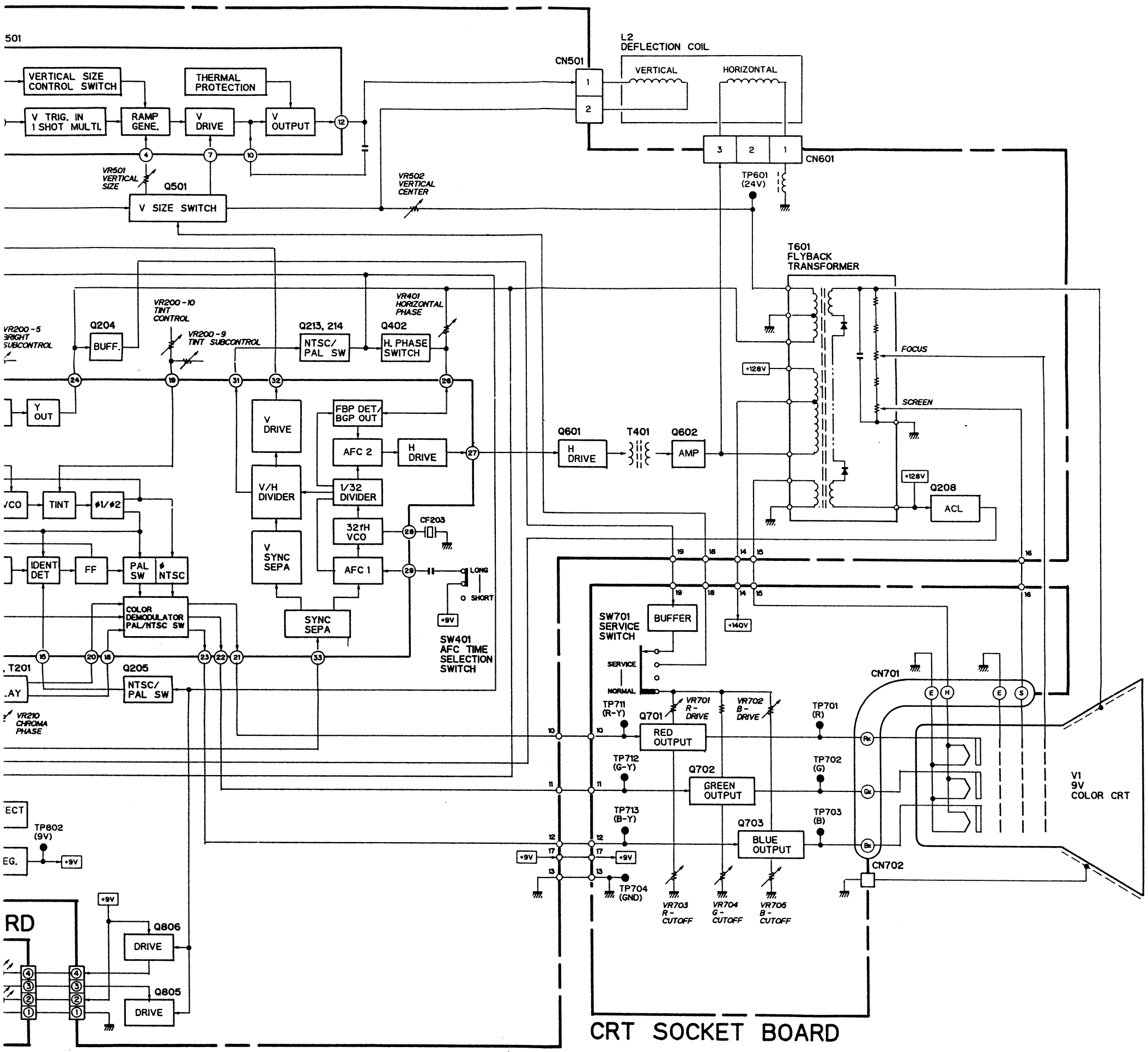
MA165T



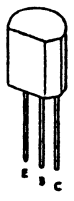
RU4AM



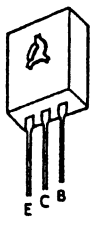
GRAM OF COLOUR VIDEO MONITOR WV-CM1000



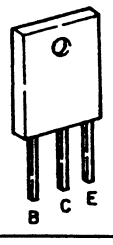
2SC2271E
2SD1207-STU



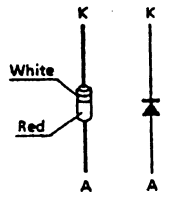
2SC3503E



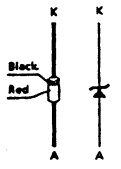
2SD1541



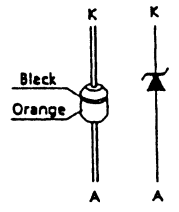
MA165TA



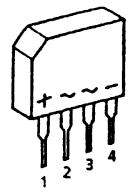
RB10ESB3T



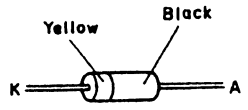
RD3.6EB2



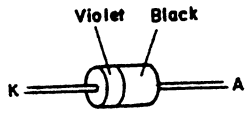
D3SBA40



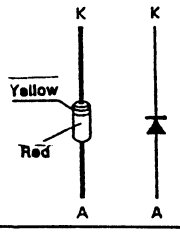
RH1Z



RU4AM



MA856TA
MA856



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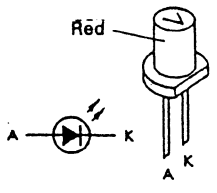

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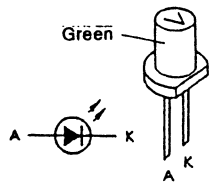
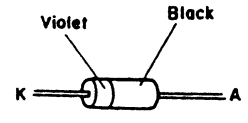
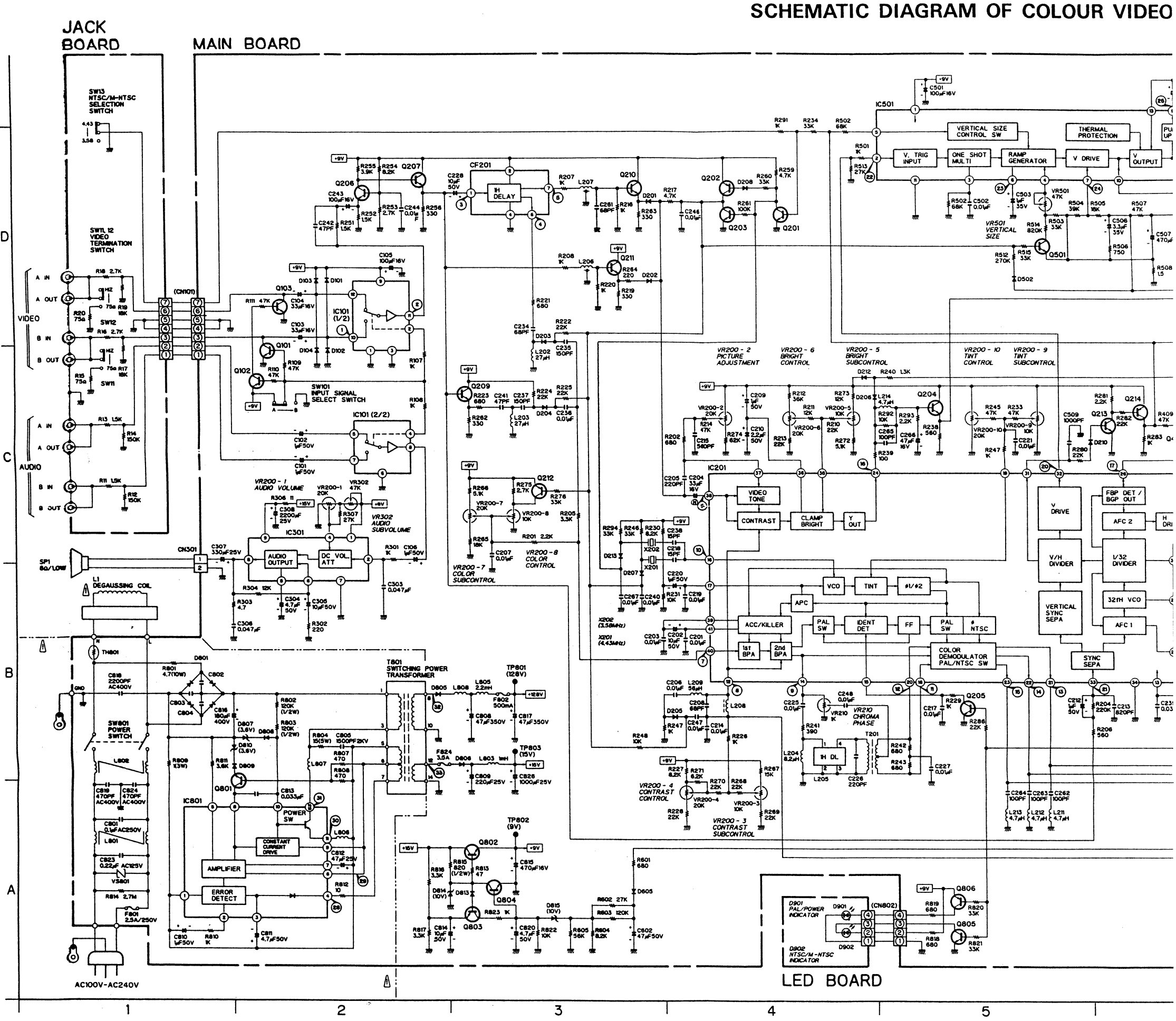


RU-2



SCHEMATIC DIAGRAM OF COLOUR VIDEO



<VOLTAGES>

MAIN BOARD

	IC101	IC201	IC301	IC501	IC801	CF201
Pin 1	0	0	9.5	0	0	5.1
2	0	0	4.1	4.7	0	9.6
3	0	0	0	4.7	0	0
4	9.5	0	0	4.8	3.6	0
5	0	0	7.2	3.8	0	0
6	0	0	7.2	4.5	0	4.8
7	6.1	0	0	0	0	4.8
8	5.4	0	7.4	0	0	
9	9.5	0	15.8	1.9	0	
10	6.1	0		0	0	
11	5.4	0		0	0	
12	6.1	6.0		12.7	0	
13		9.6		25.5	0	
14		0.5			-63	
15		0.7			-63	
16		0				
17		6.4				
18		2.7				
19		4.3				
20		2.6				
21		5.6				
22		5.6				
23		5.7				
24		4.8				

	IC201
Pin 25	7.6
26	-4.7
27	0.6
28	5.0
29	0
30	0
31	4.2
32	4.9
33	8.2
34	0
35	4.1
36	2.6
37	5.0
38	1.9
39	5.7
40	6.9
41	6.4
42	0
43	0
44	0
45	0.1
46	0
47	0
48	0

MAIN BOARD

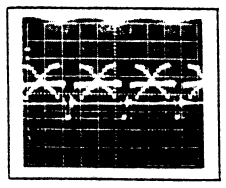
	B	C	E
Q101	0.6	0	0
102	9.5	-0.7	9.5
103	0	0	-0.7
201	0.6	0	0
202	8.8	9.5	9.5
203	0	9.5	0
204	4.5	9.4	3.7
205	0	0	0
206	2.3	4.8	1.6
207	4.8	9.5	4.1
208	0	5.9	0.4
209	0	0	3.5
210	2.3	9.6	1.7
211	2.0	9.5	1.4
212	9.5	7.3	9.6
213	0.7	0	0
214	8.7	9.4	9.5
402	0.2	-0.3	0
501	0.6	0	0
601	0.3	91	0
602	0	0	27.0
801	0	-0.1	-0.3
802	10.2	16.1	9.6
803	0.7	0	0
804	0	10.2	0
805	0.7	0	0
806	9.4	0	9.6

CRT BOARD

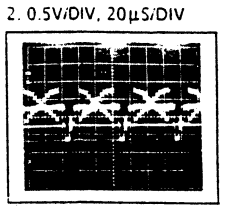
	B	C	E
Q701	5.6	120.3	5.3
702	5.5	122.0	5.4
704	4.1	0	4.5
708	5.5	121.0	5.3

<WAVEFORMS>

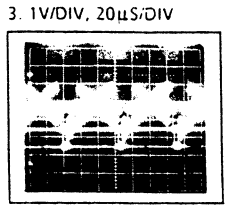
1. 0.5V/DIV, 20μS/DIV



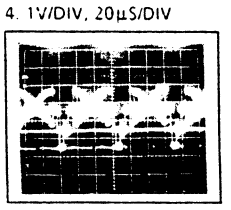
2. 0.5V/DIV, 20μS/DIV



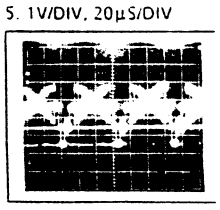
3. 1V/DIV, 20μS/DIV



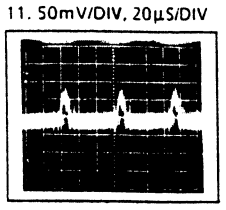
4. 1V/DIV, 20μS/DIV



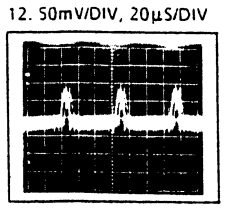
5. 1V/DIV, 20μS/DIV



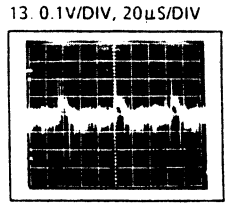
11. 50mV/DIV, 20μS/DIV



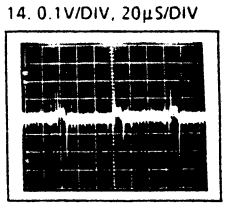
12. 50mV/DIV, 20μS/DIV



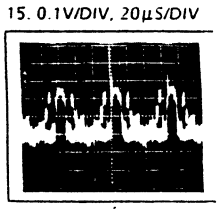
13. 0.1V/DIV, 20μS/DIV



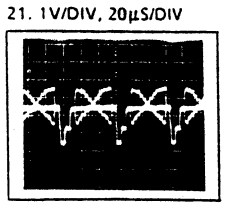
14. 0.1V/DIV, 20μS/DIV



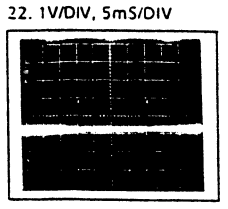
15. 0.1V/DIV, 20μS/DIV



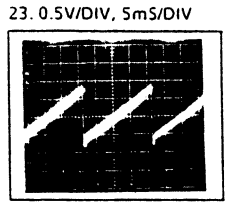
21. 1V/DIV, 20μS/DIV



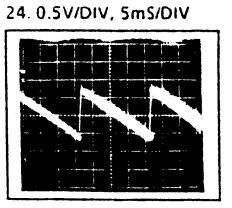
22. 1V/DIV, 5mS/DIV



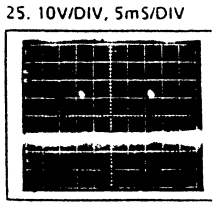
23. 0.5V/DIV, 5mS/DIV



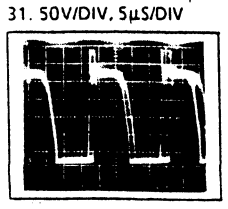
24. 0.5V/DIV, 5mS/DIV



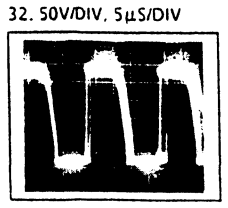
25. 10V/DIV, 5mS/DIV



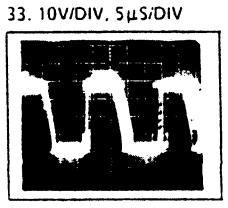
31. 50V/DIV, 5μS/DIV



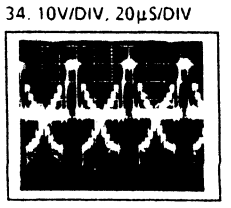
32. 50V/DIV, 5μS/DIV



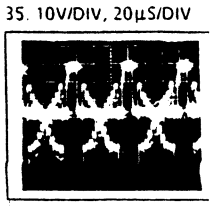
33. 10V/DIV, 5μS/DIV



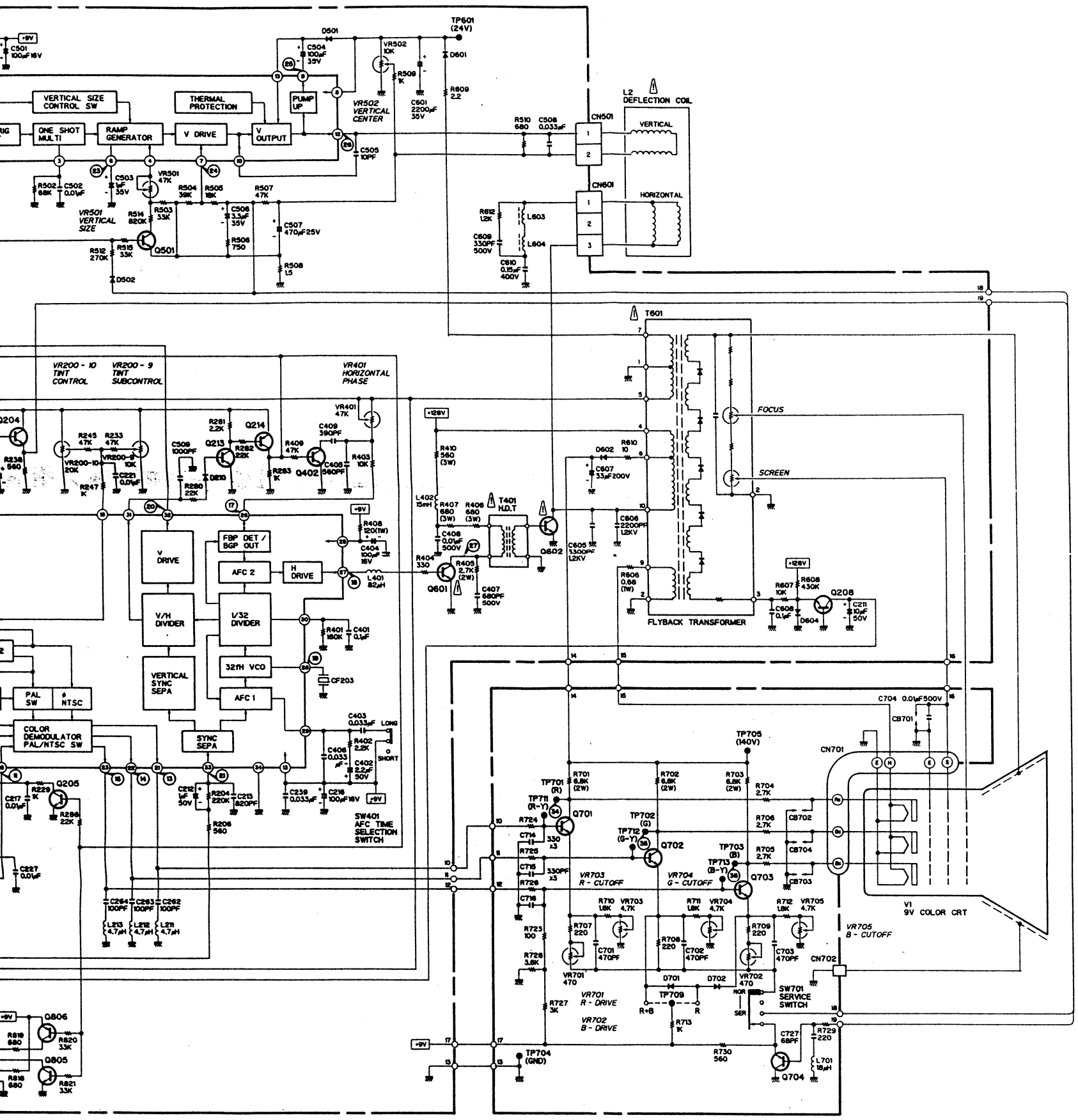
34. 10V/DIV, 20μS/DIV



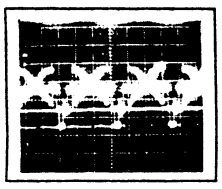
35. 10V/DIV, 20μS/DIV



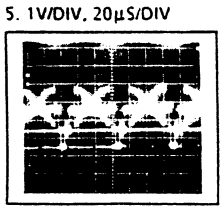
GRAM OF COLOUR VIDEO MONITOR WV-CM1000



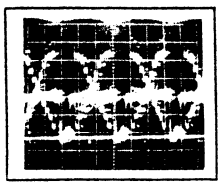
4. 1V/DIV, 20μS/DIV



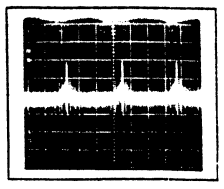
5. 1V/DIV, 20μS/DIV



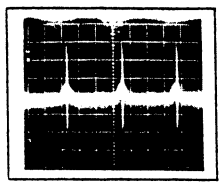
6. 0.2V/DIV, 20μS/DIV



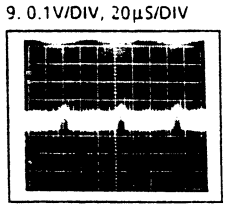
7. 0.1V/DIV, 20μS/DIV



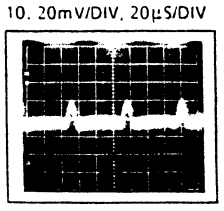
8. 0.1V/DIV, 20μS/DIV



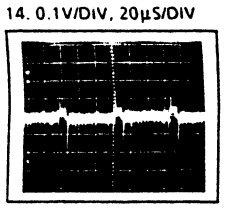
9. 0.1V/DIV, 20μS/DIV



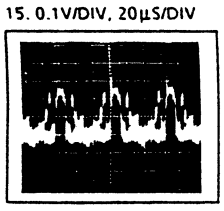
10. 20mV/DIV, 20μS/DIV



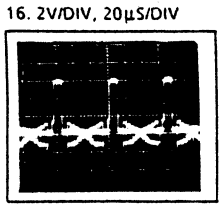
14. 0.1V/DIV, 20μS/DIV



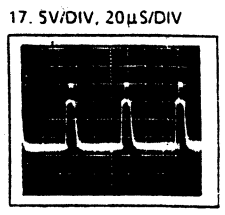
15. 0.1V/DIV, 20μS/DIV



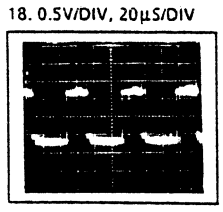
16. 2V/DIV, 20μS/DIV



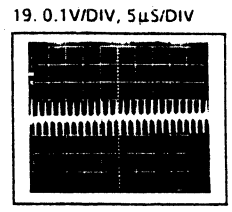
17. 5V/DIV, 20μS/DIV



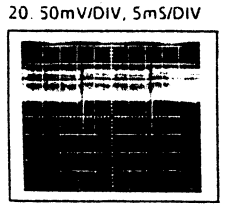
18. 0.5V/DIV, 20μS/DIV



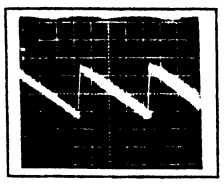
19. 0.1V/DIV, 5μS/DIV



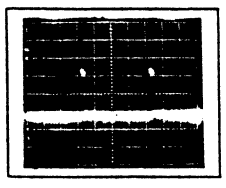
20. 50mV/DIV, 5mS/DIV



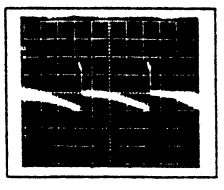
24. 0.5V/DIV, 5mS/DIV



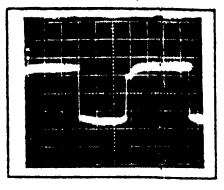
25. 10V/DIV, 5mS/DIV



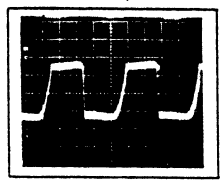
26. 20V/DIV, 5mS/DIV



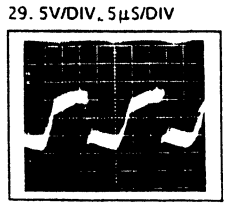
27. 50V/DIV, 10μS/DIV



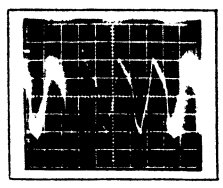
28. 20V/DIV, 5μS/DIV



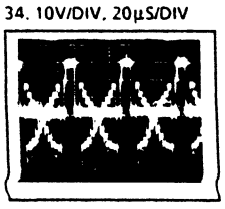
29. 5V/DIV, 5μS/DIV



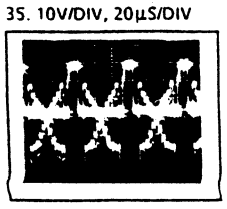
30. 10V/DIV, 10mS/DIV



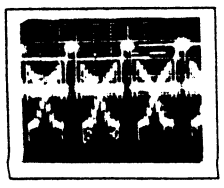
34. 10V/DIV, 20μS/DIV



35. 10V/DIV, 20μS/DIV



36. 10V/DIV, 20μS/DIV



PRODUCT SAFETY NOTICE
COMPONENT IDENTIFIED WITH THE " ⚠ " MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHN SERVICING ANY OF THESE COMPONENTS, IT IS ESSENCIAL THAT ONLY MANUFACTURE'S SPECIFIED PARTS BE USED

< ADDRESS INFORMATION >

MAIN BOARD

IC101	C2,D2
IC201	C4
IC301	C2
IC501	D5
IC801	A2
Q101	C2
Q102	C2
Q103	D2
Q201	D4
Q202	D4
Q203	D4
Q204	C5
Q205	B5
Q206	D2
Q207	D2
Q208	C8
Q209	C3
Q210	D3
Q211	D3
Q212	C3
Q213	C6
Q214	C6
Q402	C6
Q501	D5
Q601	C7
Q602	C7
Q801	A2
Q802	A3
Q803	A3
Q804	A3
Q805	A5
Q806	A5
D101	D2
D102	C2
D103	D2
D104	C2
D201	D3
D202	D3
D203	D3
D204	C3
D205	B4
D206	C5
D207	B3
D208	D4
D210	C6
D212	C4
D213	C3
D501	E6
D502	D5
D601	E7
D602	C7
D604	C8
D605	A3
D801	B1
D805	B2
D806	B3
D807	B2
D808	B2
D809	B2
D810	B2
D813	A3
D814	A2
D815	A3

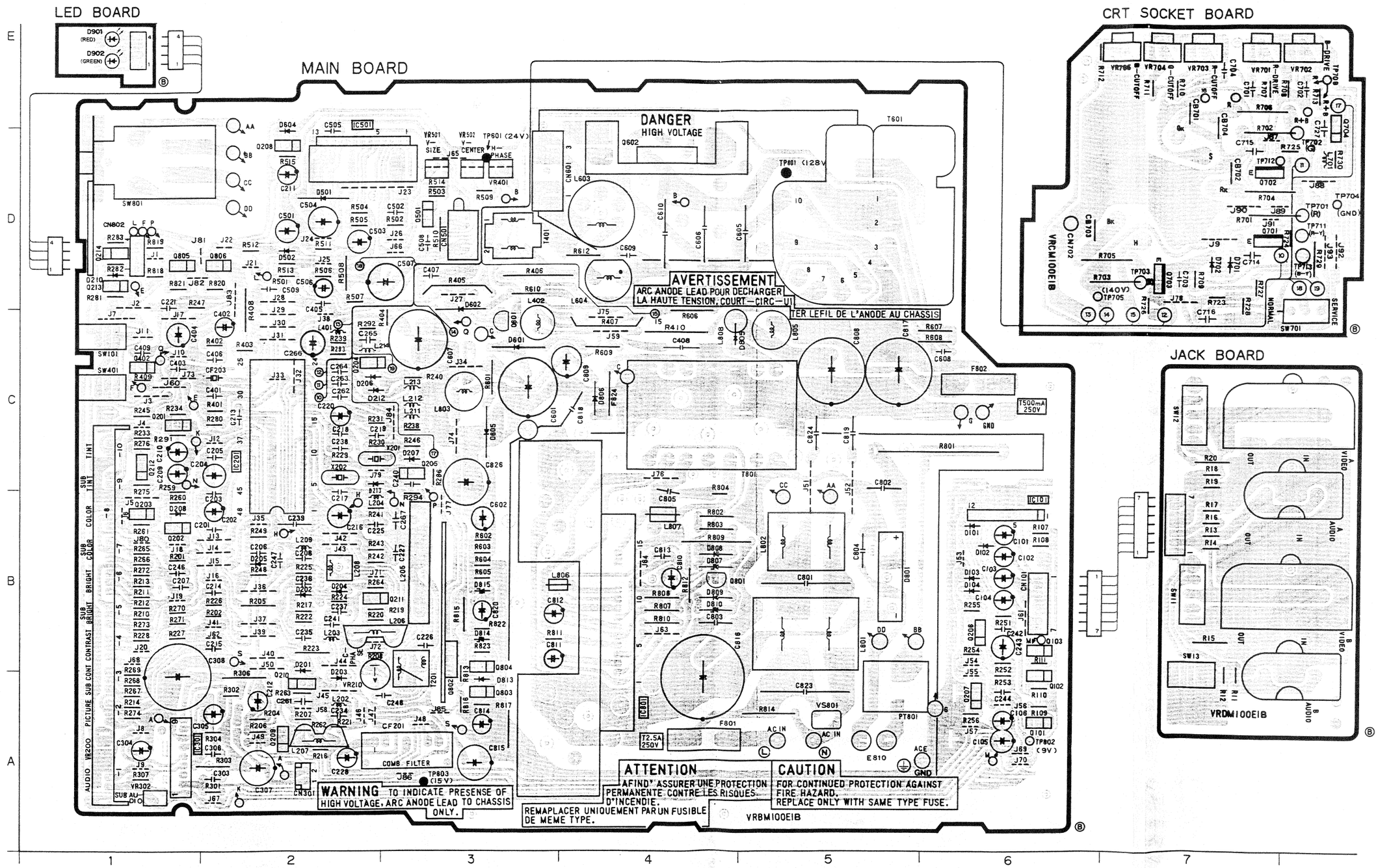
CRT BOARD

Q701	B7
Q702	B7
Q703	A8
Q704	A8
D701	A7
D702	A7

LED BOARD

D901	A4
D902	A4

CONDUCTOR VIEW OF COLOUR VIDEO MONITOR WV-CM1000



< ADDRESS INFORMATION >

MAIN BOARD

IC101	B6
IC201	C2
IC301	A1
IC501	D2
IC801	A4
Q101	A6
Q102	A6
Q103	B6
Q201	C1
Q202	B1
Q203	B1
Q204	C2
Q205	C3
Q206	B6
Q207	A6
Q208	D2
Q209	A2
Q210	A2
Q211	B2
Q212	C1
Q213	D1
Q214	D1
Q402	C1
Q501	D3
Q601	C3
Q602	D4
Q801	B4
Q802	B3
Q803	A3
Q804	B3
Q805	D1
Q806	D2
D101	B6
D102	B6
D103	B6
D104	B6
D201	B1
D202	B2
D203	A2
D204	B2
D205	B2
D206	C2
D207	C3
D208	B1
D210	D1
D212	C2
D213	C2
D501	D2
D502	D2
D601	C3
D602	D3
D604	E2
E605	C3
E801	B5
D805	C4
D806	C4
D807	B4
D808	B4
D809	B4
D810	B4
D813	A3
D814	B3
D815	B3

CRT BOARD

Q701	D7
Q702	D7
Q703	D7
Q704	E8
D701	D7
D702	D7

LED BOARD

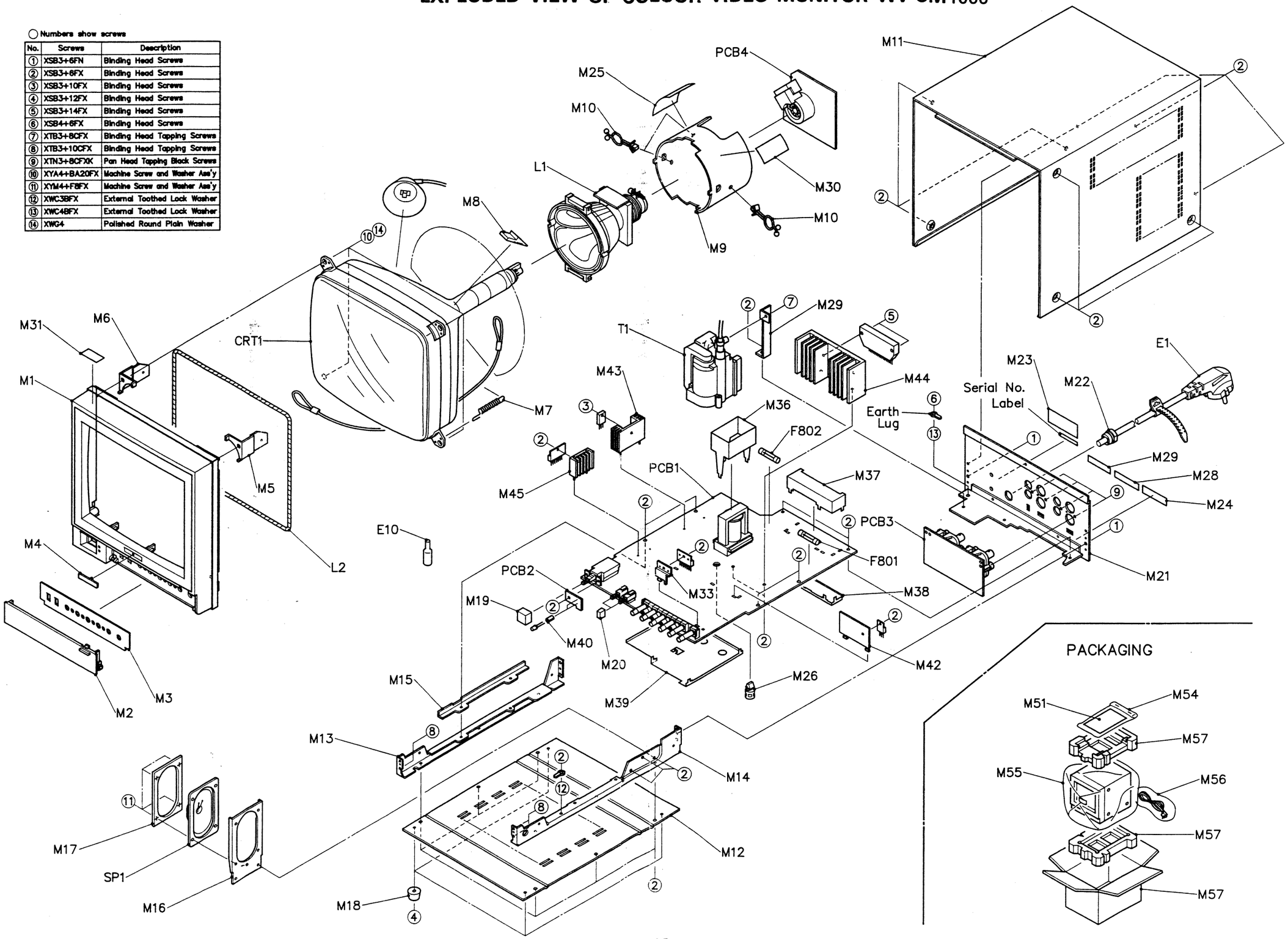
D901	E1
D902	E1

IDE-V00968 / Druck 3

EXPLODED VIEW OF COLOUR VIDEO MONITOR WV-CM1000

○ Numbers show screws

No.	Screws	Description
①	XSB3+6FN	Binding Head Screws
②	XSB3+6FX	Binding Head Screws
③	XSB3+10FX	Binding Head Screws
④	XSB3+12FX	Binding Head Screws
⑤	XSB3+14FX	Binding Head Screws
⑥	XSB4+6FX	Binding Head Screws
⑦	XTB3+8CFX	Binding Head Tapping Screws
⑧	XTB3+10CFX	Binding Head Tapping Screws
⑨	XTN3+8CFXK	Pan Head Tapping Black Screws
⑩	XYA4+BA20FX	Machine Screw and Washer Ass'y
⑪	XYM4+F8FX	Machine Screw and Washer Ass'y
⑫	XWC3BFX	External Toothed Lock Washer
⑬	XWC4BFX	External Toothed Lock Washer
⑭	XWG4	Polished Round Plain Washer

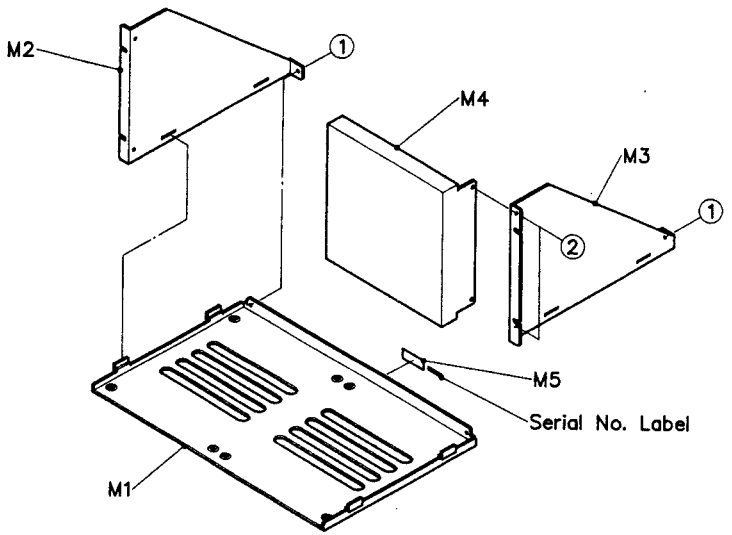


PACKAGING

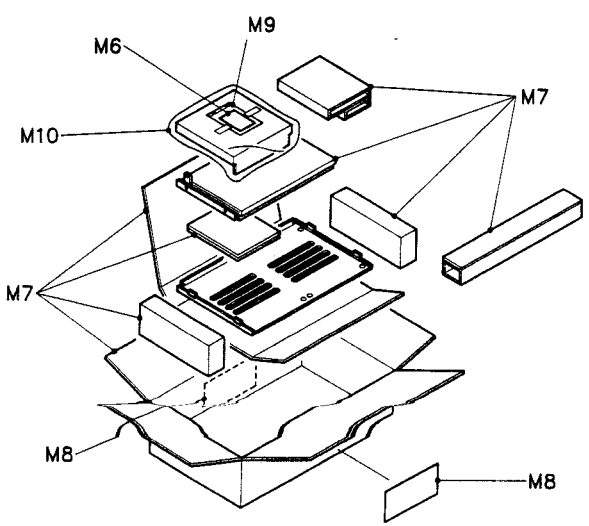
EXPLODED VIEW. OF 19" RACK MOUNT KIT

◯ Numbers show screws

No.	Screws	Description
①	XSB4+6FX	Binding Head Screws
②	XSB3+8FX	Binding Head Screws



PACKAGING



WV-CM1000

REPLACEMENT PARTS LIST

Important Notice

1 Components identified by "⚠" mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

2. Printed circuit board assembly with mark (NLA) is no longer available after production discontinuation of the complete set.

REF.NO.	PART NO.	DESCRIPTION
MISCELLANEOUS		
V1 ⚠	A22JWG38X	Cathode Ray Tube
L1 ⚠	KY10412M	Deflection Coil
L2 ⚠	YWLC1000DEG	Coil
F801 ⚠	XBA2C25ET0A	Current Fuse 2.5A 250V
F802 ⚠	XBA2C05ET0A	Current Fuse 0.5A 250V
SP1	EAS9D06	Speaker
E1 ⚠	YFKPGTSA25	AC Power Cord for WV-CM1000/A
	YWHBS308C	AC Power Cord for WV-CM1000/B
	YFVM0309088	AC Power Cord for WV-CM1000/G
E10	YFCD20ACCAP	Insulator
M1	YWV5BA0078A1	Front Escutcheon
M2	YWV6EA0140A3	Front Lid
M3	YWV5WA1174A4	Operating Panel
M4	YWV2200DM03	Badge
M5	YWV2SA1802A4	Mounting Angle for Front Escutcheon(R)
M6	YWV2SA1803A4	Mounting Angle for Front Escutcheon(L)
M7	YFV4JA0118A4	Spring
M8	YFV2NA0044B4	Spacer
M9	YWV2HA0963A3	Shield Parts
M10	CLIP0534	Support
M11	YWV5EA0946A2	Upper Cover
M12	YWV5EA0947A2	Bottom Cover
M13	YWV2KA0642A2	Chassis
M14	YWV2KA0643A2	Chassis
M15	YWV3BA0080A4	Supporting Angle
M16	YWV2SA1800A3	Mounting Angle for Speaker
M17	YWV2FA0518A4	Cushion
M18	YWV5350WB01	Rubber Foot
M19	YWV5RB0306A4	Knob
M20	YWV6JA0063A4	Button
M21	YWV5WA117SA2	Rear Panel
M22	YWSR6W1	Cord Clamp
M23 ⚠	YWV7QA2439A4	Main Label for WV-CM1000/A
	YWV7QA2440A4	Main Label for WV-CM1000/B
	YWV7QA2430A4	Main Label for WV-CM1000/G
M24	YFV7MA0099A4	UL Caution Label
M25	YWV7MA0167A4	Serviceman Label
M26	YW1E19	Spacer
M27	YWV2SA1801A4	Mounting Angle
M28	YWV7MA0015A4	Safety Label for WV-CM1000/G
M29	YWV7MA0081A4	Earth Label for WV-CM1000/G
M30	YFV7MA0192A4	High Voltage Label for WV-CM1000/G
M31	YWS-XEGRB03A	X-Ray Label for WV-CM1000/G

REF.NO.	PART NO.	DESCRIPTION
MAIN BOARD		
PCB1 (NLA)	YWVKBM100E1A	Printed Circuit Board Assy
IC101	YWLA7222	IC
IC201	YWLA7680	IC
IC301	YWAN5265	IC
IC501	YWLA7837	IC
IC801	YWSTK7308	IC
Q101	2SD636-QRS	Transistor
Q102	2SB641-QR	Transistor
Q103,201	2SD636-QRS	Transistor
Q202	2SB641-QR	Transistor
Q203-211	2SD636-QRS	Transistor
Q212	2SB641-QR	Transistor
Q213	2SD636-QRS	Transistor
Q214	2SB641-QR	Transistor
Q402,501	2SD636-QRS	Transistor
Q601 ⚠	2SC2271-DE	Transistor
Q602 ⚠	2SD1541LS	Transistor
Q801 ⚠	2SD1207-STU	Transistor
Q802	2SD1266	Transistor
Q803	2SB641-QR	Transistor
Q804,805	2SD636-QRS	Transistor
Q806	2SB641-QR	Transistor
D101-104	MA165	Diode
D201,202	MA856	Diode
D203	MA856	Diode
D204,205	MA856	Diode
D206	MA165	Diode
D207	MA856	Diode
D208	MA165	Diode
D210	MA165	Diode
D212	MA165	Diode
D213	MA856	Diode
D501	YFRH1Z	Diode
D502	MA165	Diode
D601	RU-2	Diode
D602	YFRH1Z	Diode
D604	MA165	Diode
D605	YFRH1Z	Diode
D801 ⚠	YWD3SBA40	Diode
D805	YWRU4AM	Diode
D806	RU-2	Diode
D807 ⚠	YWRD3.6FB2	Diode
D808 ⚠	YFRH1Z	Diode
D809 ⚠	YFRH1Z	Diode
D810 ⚠	YWRD3.6FB2	Diode
D813	MA165	Diode

REF.NO.	PART NO.	DESCRIPTION
D814,815	RD10ESB3T	Diode
TH801 ⚠	YWPT451ABG18	Thermistor
VS801 ⚠	ERZC07DK471U	Znr
R107,108	ERDS2TJ102	Carbon 1K ohms 1/4W
R109-111	ERDS2TJ473	Carbon 47K ohms 1/4W
R201	ERDS2TJ222	Carbon 2.2K ohms 1/4W
R202	ERDS2TJ681	Carbon 680 ohms 1/4W
R204	ERDS2TJ224	Carbon 220K ohms 1/4W
R205	ERD50FJ332	Carbon 3.3K ohms 1/2W
R206	ERDS2TJ561	Carbon 560 ohms 1/4W
R207	ERDS2TJ102	Carbon 1K ohms 1/4W
R28	ERDS2TJ102	Carbon 1K ohms 1/4W
R210	ERDS2TJ223	Carbon 22K ohms 1/4W
R211	ERDS2TJ123	Carbon 12K ohms 1/4W
R212	ERDS2TJ363	Carbon 36K ohms 1/4W
R213	ERDS2TJ223	Carbon 22K ohms 1/4W
R214	ERDS2TJ473	Carbon 47K ohms 1/4W
R216	ERDS2TJ102	Carbon 1K ohms 1/4W
R217	ERDS2TJ472	Carbon 4.7K ohms 1/4W
R219	ERDS2TJ331	Carbon 330 ohms 1/4W
R220	ERDS2TJ102	Carbon 1K ohms 1/4W
R221	ERDS2TJ681	Carbon 680 ohms 1/4W
R222	ERDS2TJ223	Carbon 22K ohms 1/4W
R223	ERD25FJ681	Carbon 680 ohms 1/2W
R224,225	ERDS2TJ223	Carbon 22K ohms 1/4W
R226	ERDS2TJ102	Carbon 1K ohms 1/4W
R227	ERDS2TJ822	Carbon 8.2K ohms 1/4W
R228	ERDS2TJ223	Carbon 22K ohms 1/4W
R229	ERDS2TJ102	Carbon 1K ohms 1/4W
R230	ERDS2TJ822	Carbon 8.2K ohms 1/4W
R231	ERDS2TJ103	Carbon 10K ohms 1/4W
R233	ERDS2TJ473	Carbon 47K ohms 1/4W
R234	ERDS2TJ333	Carbon 33K ohms 1/4W
R235-237	ERDS2TJ331	Carbon 330 ohms 1/4W
R238	ERDS2TJ561	Carbon 560 ohms 1/4W
R239	ERDS2TJ101	Carbon 100 ohms 1/4W
R240	ERDS2TJ132	Carbon 1.3K ohms 1/4W
R241	ERDS2TJ391	Carbon 390 ohms 1/4W
R242,243	ERDS2TJ681	Carbon 680 ohms 1/4W
R245	ERDS2TJ473	Carbon 47K ohms 1/4W
R246	ERDS2TJ333	Carbon 33K ohms 1/4W
R247	ERDS2TJ102	Carbon 1K ohms 1/4W
R248,249	ERDS2TJ103	Carbon 10K ohms 1/4W
R251,252	ERDS2TJ152	Carbon 1.5K ohms 1/4W
R253	ERDS2TJ272	Carbon 2.7K ohms 1/4W
R254	ERDS2TJ822	Carbon 8.2K ohms 1/4W
R255	ERDS2TJ392	Carbon 3.9K ohms 1/4W
R256	ERDS2TJ331	Carbon 330 ohms 1/4W
R259	ERDS2TJ472	Carbon 4.7K ohms 1/4W
R260	ERDS2TJ333	Carbon 33K ohms 1/4W
R261	ERDS2TJ104	Carbon 100K ohms 1/4W
R262,263	ERDS2TJ331	Carbon 330 ohms 1/4W
R264	ERDS2TJ221	Carbon 220 ohms 1/4W
R265	ERDS2TJ183	Carbon 18K ohms 1/4W
R266	ERDS2TJ512	Carbon 5.1K ohms 1/4W

REF.NO.	PART NO.	DESCRIPTION
R267	ERDS2TJ153	Carbon 15K ohms 1/4W
R268-270	ERDS2TJ223	Carbon 22K ohms 1/4W
R271	ERDS2TJ622	Carbon 6.2K ohms 1/4W
R272	ERDS2TJ512	Carbon 5.1K ohms 1/4W
R273	ERDS2TJ123	Carbon 12K ohms 1/4W
R274	ERDS2TJ623	Carbon 62K ohms 1/4W
R275	ERDS2TJ272	Carbon 2.7K ohms 1/4W
R276	ERDS2TJ333	Carbon 33K ohms 1/4W
R280	ERDS2TJ223	Carbon 22K ohms 1/4W
R281	ERDS2TJ222	Carbon 2.2K ohms 1/4W
R282	ERDS2TJ223	Carbon 22K ohms 1/4W
R283	ERDS2TJ102	Carbon 1K ohms 1/4W
R286	ERDS2TJ223	Carbon 22K ohms 1/4W
R291	ERDS2TJ102	Carbon 1K ohms 1/4W
R292	ERDS2TJ103	Carbon 10K ohms 1/4W
R293	ERDS2TJ222	Carbon 2.2K ohms 1/4W
R294	ERDS2TJ333	Carbon 33K ohms 1/4W
R301	ERDS2TJ102	Carbon 1K ohms 1/4W
R302	ERDS2TJ221	Carbon 220 ohms 1/4W
R303	ERD50FJ4R7	Carbon 4.7 ohms 1/2W
R304	ERDS2TJ123	Carbon 12K ohms 1/4W
R306	ERQ12AJ110	Fuse Resistor 11 ohms 1/2W
R307	ERDS2TJ273	Carbon 27K ohms 1/4W
R401	ERDS2TJ184	Carbon 180K ohms 1/4W
R402	ERDS2TJ222	Carbon 2.2K ohms 1/4W
R403	ERDS2TJ103	Carbon 10K ohms 1/4W
R404	ERDS2TJ331	Carbon 330 ohms 1/4W
R405	ERG3SJ272	Metal 2.7K ohms 3W
R406,407	ERG3SJ681	Metal 680 ohms 3W
R408	ERG1SJ121	Metal 120 ohms 1W
R409	ERDS2TJ473	Carbon 47K ohms 1/4W
R410	ERG3SJ561P	Metal 560 ohms 3W
R501	ERDS2TJ102	Carbon 1K ohms 1/4W
R502	ERDS2TJ683	Carbon 68K ohms 1/4W
R503	ERDS2TJ333	Carbon 33K ohms 1/4W
R504	ERDS2TJ393	Carbon 39K ohms 1/4W
R505	ERDS2TJ183	Carbon 18K ohms 1/4W
R506	ERDS2TJ751	Carbon 750 ohms 1/4W
R507	ERDS2TJ473	Carbon 47K ohms 1/4W
R508	ERD50FJ1R5	Carbon 1.5 ohms 1/2W
R509	ERDS2TJ102	Carbon 1K ohms 1/4W
R510	ERD25FJ681	Carbon 680 ohms 1/2W
R511	ERDS2TJ333	Carbon 33K ohms 1/4W
R512	ERDS2TJ274	Carbon 270K ohms 1/4W
R513	ERDS2TJ273	Carbon 27K ohms 1/4W
R514	ERDS2TJ824	Carbon 820K ohms 1/4W
R515	ERDS2TJ333	Carbon 33K ohms 1/4W
R601	ERG12SJ681	Metal 680 ohms 1/2W
R602	ERDS2TJ273	Carbon 27K ohms 1/4W
R603	ERDS2TJ124	Carbon 120K ohms 1/4W
R604	ERDS2TJ822	Carbon 8.2K ohms 1/4W
R605	ERDS2TJ563	Carbon 56K ohms 1/4W
R606	ERX1SJR68	Metal 0.68 ohms 1W
R607	ERD25FJ103	Carbon 10K ohms 1/4W
R608	ERD50FJ434	Carbon 430K ohms 1/2W

REF.NO.	PART NO.	DESCRIPTION
R609	ERQ14AJ2R2	Fuse Resistor 2.2 ohms 1/4W
R610	ERD2FCG100P	Fuse Resistor 10 ohms 1/4W
R612	ERD50FJ122	Carbon 1.2K ohms 1/2W
R801 ⚠	ERF10ZYK4R7	Wire Wound 4.7 ohms 10W
R802,803 ⚠	ERD50FJ124	Carbon 120K ohms 1/4W
R804 ⚠	ERF5TK150	Metal 15 ohms 5W
R807,808 ⚠	ERD50FJ471	Carbon 470 ohms 1/2W
R809 ⚠	ERX3SJ1R0P	Fuse Resistor 1 ohms 3W
R810	ERD25FJ102	Carbon 1K ohms 1/2W
R811 ⚠	ERDS2TJ362	Carbon 3.6K ohms 1/4W
R812 ⚠	ERD2FCG100P	Fuse Resistor 10 ohms 14W
R813	ERDS2TJ470	Carbon 47 ohms 1/4W
R814 ⚠	ERC12GK275	Solid Resistor 2.7M ohms 1/2W
R815	ERD50FJ821	Carbon 820 ohms 1/2W
R816,817	ERDS2TJ332	Carbon 3.3K ohms 1/4W
R818,819	ERDS2TJ681	Carbon 680 ohms 1/4W
R820,821	ERDS2TJ333	Carbon 33K ohms 1/4W
R822	ERDS2TJ103	Carbon 10K ohms 1/4W
R823	ERDS2TJ102	Carbon 1K ohms 1/4W
VR200	YWRK09Z101B	Variable Resistor 100 ohms
VR210	EVND8AA00B13	Variable Resistor 1K ohms
VR302,401	EVND2AA03BQ4	Variable Resistor 47K ohms
VR501	EVND2AA03BQ4	Variable Resistor 47K ohms
VR502	EVND2AA03B14	Variable Resistor 10K ohms
C101,102	ECEA1HU010	Electrolytic 1 µF 50V (SU)
C103,104	ECEA1CU330	Electrolytic 33 µF 16V
C105	ECEA1CU101	Electrolytic 100 µF 16V
C106	ECEA1HU010	Electrolytic 1 µF 50V (SU)
C201	ECQB1H103JZ	Plastic 0.01 µF 50V
C202	ECEA1HU100	Electrolytic 10 µF 50V
C203	ECQB1H103JZ	Plastic 0.01 µF 50V
C204	ECEA1CN330S	Electrolytic 33 µF 16V
C205	ECKF1H221KB	Ceramic 220 PF 50V
C206,207	ECQB1H103JZ	Plastic 0.01 µF 50V
C208	ECCF1H680JC	Ceramic 68 pF 50V
C209	ECEA1HU010	Electrolytic 1 µF 50V (SU)
C210	ECEA1HU2R2	Electrolytic 2.2 µF 50V
C211	ECEA1HGE100	Electrolytic 10 µF 50V
C212	ECEA1HU010	Electrolytic 1 µF 50V (SU)
C213	ECKF1H821KB	Ceramic 820 µF 50V
C214	ECQB1H103JZ	Plastic 0.01 µF 50V
C215	ECKF1H561KB	Ceramic 560 pF 50V
C216	ECEA1CU101	Electrolytic 100 µF 16V
C217	ECQB1H103JZ	Plastic 0.01 µF 50V
C218	ECCF1H150JC	Ceramic 15 pF 50V
C219	ECQB1H103JZ	Plastic 0.01 µF 50V
C220	ECEA1HU010	Electrolytic 1 µF 50V (SU)
C221,225	ECQB1H103JZ	Plastic 0.01 µF 50V
C226	ECKF1H221KB	Ceramic 220 pF 50V
C227	ECQB1H103JZ	Plastic 0.01 µF 50V
C228	ECEA1HU100	Electrolytic 10 µF 50V
C233	ECCF1H470JC	Ceramic 47 pF 50V
C234	ECCF1H680JC	Ceramic 68 pF 50V
C235	ECKF1H151KB	Ceramic 150 pF 50V
C236	ECQB1H103JZ	Plastic 0.01 µF 50V

REF.NO.	PART NO.	DESCRIPTION
C237	ECKF1H151KB	Ceramic 150 pF 50V
C238	ECCF1H150JC	Ceramic 15 pF 50V
C239	ECQM1H333KZ	Plastic 0.033 µF 50V
C240	ECQB1H103JZ	Plastic 0.01 µF 50V
C241,242	ECCF1H470JC	Ceramic 47 pF 50V
C243	ECEA1CU101	Electrolytic 100 µF 16V
C244,246	ECQB1H103JZ	Plastic 0.01 µF 50V
C247,248	ECQB1H103JZ	Plastic 0.01 µF 50V
C261	ECCF1H680JC	Ceramic 68 pF 50V
C262-265	ECKF1H101KB	Ceramic 100 pF 50V
C266	ECEA1CU470	Electrolytic 47 µF 16V
C267	ECQB1H103JZ	Plastic 0.01 µF 50V
C303	ECQM1H473KZ	Plastic 0.047 µF 50V
C304	ECEA1HU4R7	Electrolytic 4.7µF 50V
C305	ECEA1HU100	Electrolytic 10 µF 50V
C306	ECQM1H473KZ	Plastic 0.047 µF 50V
C307	ECEA1ES331	Electrolytic 330 µF 25V(SU)
C308	ECEA1ESS222	Electrolytic 2200 µF 25V
C401	ECQV1H104JZ	Plastic 0.1 µF 50V
C402	ECEA1HU2R2	Electrolytic 2.2 µF 50V
C403	ECQM1H333KZ	Plastic 0.033 µF 50V
C404	ECEA1CU101	Electrolytic 100 µF 16V
C405	ECKF1H561KB	Ceramic 560 pF 50V
C406	ECQM1H333KZ	Plastic 0.033 µF 50V
C407	ECKDHT681KB	Ceramic 680 pF 500V
C408	ECKD2H103KB	Ceramic 0.01 µF 500V
C409	ECKF1H391KB	Ceramic 390 pF 50V
C501	ECEA1CU101	Electrolytic 100 µF 16V
C502	ECQB1H103JZ	Plastic 0.01 µF 50V
C503	ECSF1VZ105	Tantalum 1 µF 35V
C504	ECEA1VU101	Electrolytic 100 µF 35V
C505	ECCF1H100JC	Ceramic 10 pF 50V
C506	ECSF1VZ335	Tantalum 3.3 µF 35V
C507	ECEA1EU471	Electrolytic 470 µF 25V(SU)
C508	ECQM1H333KZ	Ceramic 330 pF 50V
C509	ECQM1H102KZ	Plastic 1000 pF 50V
C601	ECEA1VU222	Electrolytic 2200 µF 35V
C602	ECEA1HGE470	Electrolytic 47 µF 50V
C605	ECWH12H332KR	Plastic 3300 pF 1.25KV
C606	ECWH12H222KR	Plastic 2200 pF 1.25KV
C607	ECEA2DG330S	Electrolytic 33 µF 200V
C608	ECQV1H104JZ	Plastic 0.1 µF 50V
C609	ECKDHT331KB	Ceramic 330 pF 500V
C610	ECQF4154KZH	Ceramic 0.15 µ F 400V
C801 ⚠	ECQU2A104MNB	Plastic 0.1 µF 250V
C802-804 ⚠	YWDE7150F472	Ceramic 4700 pF
C805 ⚠	ECKD3D152KB	Ceramic 1500 pF 2KV
C808	ECEA2VG470S	Electrolytic 47 µF 350V
C809	ECEA1ES221	Electrolytic 220 µF 25V(SU)
C810 ⚠	ECEA1HGE010	Electrolytic 1 µF 50V
C811 ⚠	ECEA1VG475	Electrolytic 4.7 µF 35V
C812 ⚠	ECEA1EGE470	Electrolytic 47 µF 25V
C813 ⚠	ECQM1H333KZ	Ceramic 330 pF 50V
C814	ECEA1HGE100	Electrolytic 10 µF 50V
C815	ECEA1CU471	Electrolytic 470 µF 16V

REF.NO.	PART NO.	DESCRIPTION
C816 ⚠	ECOS2GG1B1N	Electrolytic 180 µF 400V
C817	ECEA2VG470S	Electrolytic 47 µF 350V
C818	ECKDWS222ME	Ceramic 2200 pF 400V
C819 ⚠	ECKDWS471KB	Ceramic 470 pF 400V
C820	ECEA1HGE4R7	Electrolytic 4.7 µF 50V
C823 ⚠	ECQU2A224KN	Plastic 0.22 µF 125V
C824 ⚠	ECKDWS471KB	Ceramic 470 pF 400V
C826	ECEA1EU102	Electrolytic 1000 µF 25V (SU)
L202,203	LAL02NA270K	Coil 27 µH
L204	LAL02NA8R2K	Coil 8.2 µH
L205	YWPDL644K1P	Delay Line
L206	YWSEL5104	Coil
L207	YWSDL4420	Delay Line
L208	YWMA8051	Coil
L209	YWLAP2TA560K	Coil
L211-214	LAL02NA4R7K	Coil 4.7 µH
L401	LAL02NA820K	Coil 82 µH
L402	YWFL9H153J	Coil
L603	ELH16F777	Coil
L604	ELH5L425	Coil
L801 ⚠	YWELF18D650U	Coil
L802 ⚠	ELF18D290G	Coil
L803	YWFL11H102J	Coil
L805	YWFL11H222J	Coil
L806,807 ⚠	YWBP53BH	Coil
L808	YWBP53BH	Coil
T201	YWKW90112	Low Freq Transformer
T401 ⚠	TLH15412	Low Freq Transformer
T601 ⚠	ETF39L63AZ	Flyback Transformer
T801 ⚠	ETS39K557V	Power Transformer
SW101,401	YWSPUP192WNS	Push Switch
SW801 ⚠	YWSDDFA3	Push Switch
X201	YW49U4433619	Crystal Oscillator 4.43M
X202	YW49U3579545	Crystal Oscillator 3.58M
CF201	YWADLMN138A	Filter
CF203	YWCSB500F25	Ceramic Filter
FB24	SSFR3.5AF003	Current Fuse
CN301	YWTSLP02PV2	Connector
CN501	521902A	Connector
CN601	521903A	Connector
E1-4	YWSN5053	Fuse Holder
E5	YWTM028	Terminal
E6	YW851440	Insulator Cap
E601,801	YW32BM12R5	Terminal
E802-804	YW32BM12R5	Terminal
M36	YWV2HA0962A3	Shield Parts
M37	YWV2HA0965A4	Shield Parts
M38	YWV2HA0966A4	Shield Parts
M39	YWV2HA0971A2	Shield Parts
M40	YWLH515	Spacer
M41	YWV7DA0279A4	Heat Sink
M42	YWV7DA0280A4	Heat Sink
M43	YWV7DA0281A4	Heat Sink
M44	YWV7DA0282A4	Heat Sink
M45	YWV7DA0283A4	Heat Sink

LED BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB2 (NLA)	YWVKEM100E1A	Printed Circuit Board Assy
D901	YWSEL2111R	LED
D902	YWSEL2311G	LED

JACK BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB3 (NLA)	YWVKDM100E1A	Printed Circuit Board Assy
R11	ERDS2TJ152	Carbon 1.5K ohms 1/4W
R12	ERDS2TJ154	Carbon 150K ohms 1/4W
R13	ERDS2TJ152	Carbon 1.5K ohms 1/4W
R14	ERDS2TJ154	Carbon 150K ohms 1/4W
R15	ERD50FJ750	Carbon
R16	ERDS2TJ272	Carbon 2.7K ohms 1/4W
R17	ERDS2TJ183	Carbon 18K ohms 1/4W
R18	ERDS2TJ272	Carbon 2.7K ohms 1/4W
R19	ERDS2TJ183	Carbon 18K ohms 1/4W
R20	ERD50FJ750	Carbon 75 ohms 1/2W
SW11,12	ESD32184	Slide Switch
SW13	ESD172211	Slide Switch
CN1,2	YWP2197	Connector
CN3,4	YWT5899AAAA	Connector

REF.NO.	PART NO.	DESCRIPTION
CRT SOCKET BOARD		
PCB4 (NLA)	YWVKCM100E1A	Printed Circuit Board Assy
Q701-703	2SC3503-EF	Transistor
Q704	2SB641-QR	Transistor
D701,702	MA165	Diode
R701-703	ERG2SJ682	Metal
R704-706	ERC12GK272C	Solid Resistor
R707	ERDS2TJ221	Carbon 220 ohms 1/4W
R708	ERDS2TJ391	Carbon 390 ohms 1/4W
R709	ERDS2TJ221	Carbon 220 ohms 1/4W
R710-712	ERDS2TJ182	Carbon 1.8K ohms 1/4W
R713	ERDS2TJ102	Carbon 1K ohms 1/4W
R723	ERDS2TJ101	Carbon 100 ohms 1/4W
R724-726	ERDS2TJ331	Carbon 330 ohms 1/4W
R727	ERDS2TJ302	Carbon 3K ohms 1/4W
R728	ERDS2TJ362	Carbon 3.6K ohms 1/4W
R729	ERD50FJ221	Carbon
R730	ERDS2TJ561	Carbon 560 ohms 1/4W
VR701,702	H1052A471B	Variable Resistor 470 ohms
VR703-705	YWH1052A4R7K	Variable Resistor 4.7K ohms
C701-703	ECKF1H471KB	Ceramic 470 pF 50V
C704	ECKDHT102KB	Ceramic 1000 pF
C714-716	ECKF1H331KB	Ceramic 330 pF 50V
C727	ECCF1H680JC	Ceramic 68 pF 50V
L701	LAL02NA180K	Coil 18 µF
SW701	EVQR1AL13	Lever Switch
CB701-704	YFAG20PC122F	Braker
CN701	HPS013901600	Socket
CN702	YW003P2100	3-pin Connector
E701-705	YW32BM12R5	Terminal
E711-713	YW32BM12R5	Terminal
ACCESSORY PARTS/PACKAGING PARTS		
M51	YWV8QA2347AN	Operating Instructions
M54	XZB26X40C05	Polyethylene Bag
M55	XZB60X70A05	Polyethylene Bag
M56	YWT20X35C03	Polyethylene Bag
M57	YWV9CA1545AN	Packaging Assy

REF.NO.	PART NO.	DESCRIPTION
19" RACK MOUNT		
MISCELLANEOUS		
M1	YWV2KA0644B3	Main Chassis
M2	YWV2KA0645C3	Left Side Angle
M3	YWV2KA0646C3	Right Side Angle
M4	YWV6GA0174B3	Blank Plate
M5	YWV7QA2431A4	Main Label
ACCESSORY PARTS/PACKAGING PARTS		
M6	YWV8QA2348AN	Operating Instructions
M7	YWV9CA1546BN	Packaging Assy
M8	YWV8FA0140A4	Packaging Label
M9	YWT10X10C03	Polyethylene Bag
M10	YWT20X35C03	Polyethylene Bag

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ORDER NO. AVS9505964S8

Service Manual

Colour Video Monitor

WV-CM1000

Supplement - 1

Please file and use this supplement service manual together with original service manual for Model NO.WV-CM1000, Order No. AVS9103449C8.

LIST OF MODIFICATION

■ MAIN BOARD

- VR501, R259, R261, R265 and R509 have been changed to improve the V. SIZE adjustment from Serial No. 16W00001 and higher.
- R809 has been changed to prevent the destruction of IC801 from Serial No. 16W00001 and higher.
- L402 and C408 have been deleted to prevent the increasing temperature from Serial No. 16W00001 and higher.
- R306 and C305 have been changed and R295 has been added to improve the performance from Serial No. 16W00001 and higher.
- C809, C811, C817, L208, C819 and F824 have been changed to prevent the malfunction of power circuit from Serial No. 28W00001 and higher.

- C808 and L805 have been deleted to prevent the malfunction of power circuit from Serial No. 28W00001 and higher.
- F825, F826, D816 and D817 have been added to prevent the malfunction of power circuit from Serial No. 28W00001 and higher.
- R230, R231 C220, C215 and C202 have been changed and C268 has been added to stability of colour balance from Serial No. 15W00001 and higher.
- R235, R236, R237 and C233 have been deleted to improve the productivity from Serial No. 18W00001 and higher.
- R269 and R602 have been changed to improve the performance from Serial No. 18W00001 and higher.

- C605 and C606 have been changed to prevent the moire from Serial No. 17W00001 and higher.
- R221 has been changed to stability of colour level from Serial No. 17W00001 and higher.
- R610 and R812 have been corrected from Serial No. 22W00001 and higher.
- C820 and C828 have been added to protect the power circuit from Serial No. 22W00001 and higher.

■ CRT SOCKET BOARD

- R710, R711, R712, VR703, VR704 and VR705 have been changed and C730 has been added to improve the performance from Serial No. 18W00001 and higher.

Panasonic

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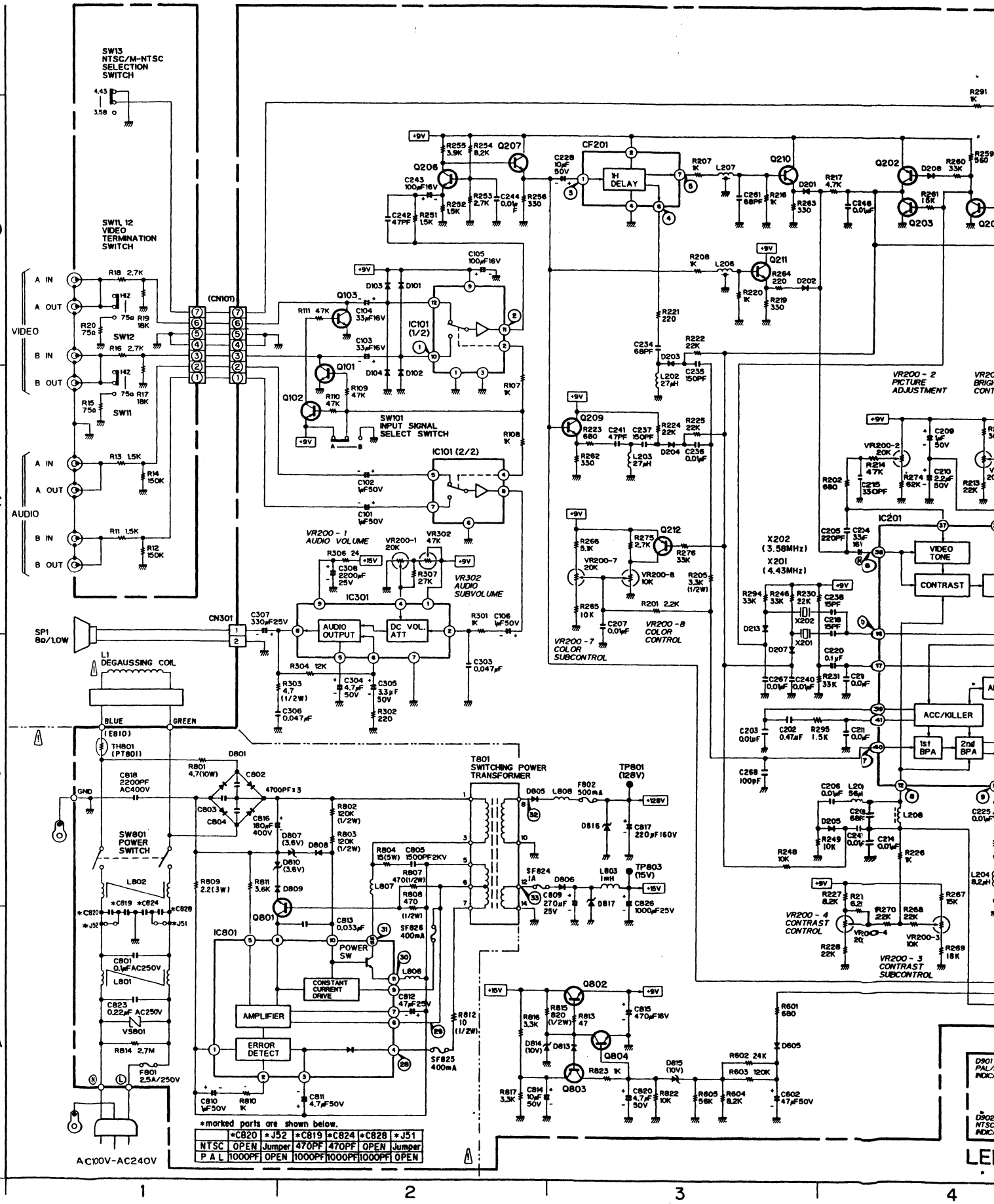
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

SCHEMATIC DIAGRAM OF CO

JACK BOARD

MAIN BOARD

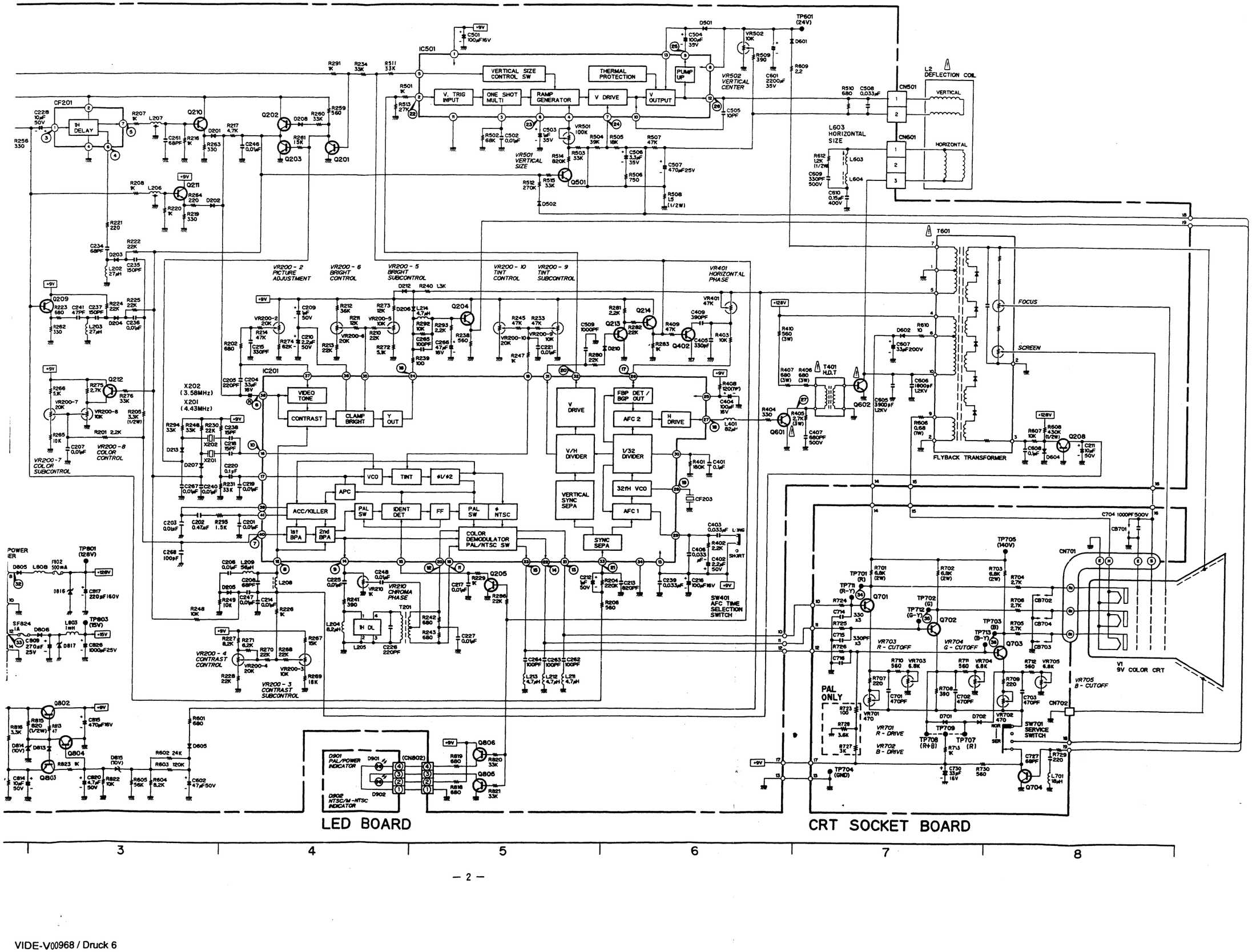


	*C820	* J52	*C819	*C824	*C828	* J51
NTSC	OPEN	Jumper	470PF	470PF	OPEN	Jumper
PAL	1000PF	OPEN	1000PF	1000PF	1000PF	OPEN

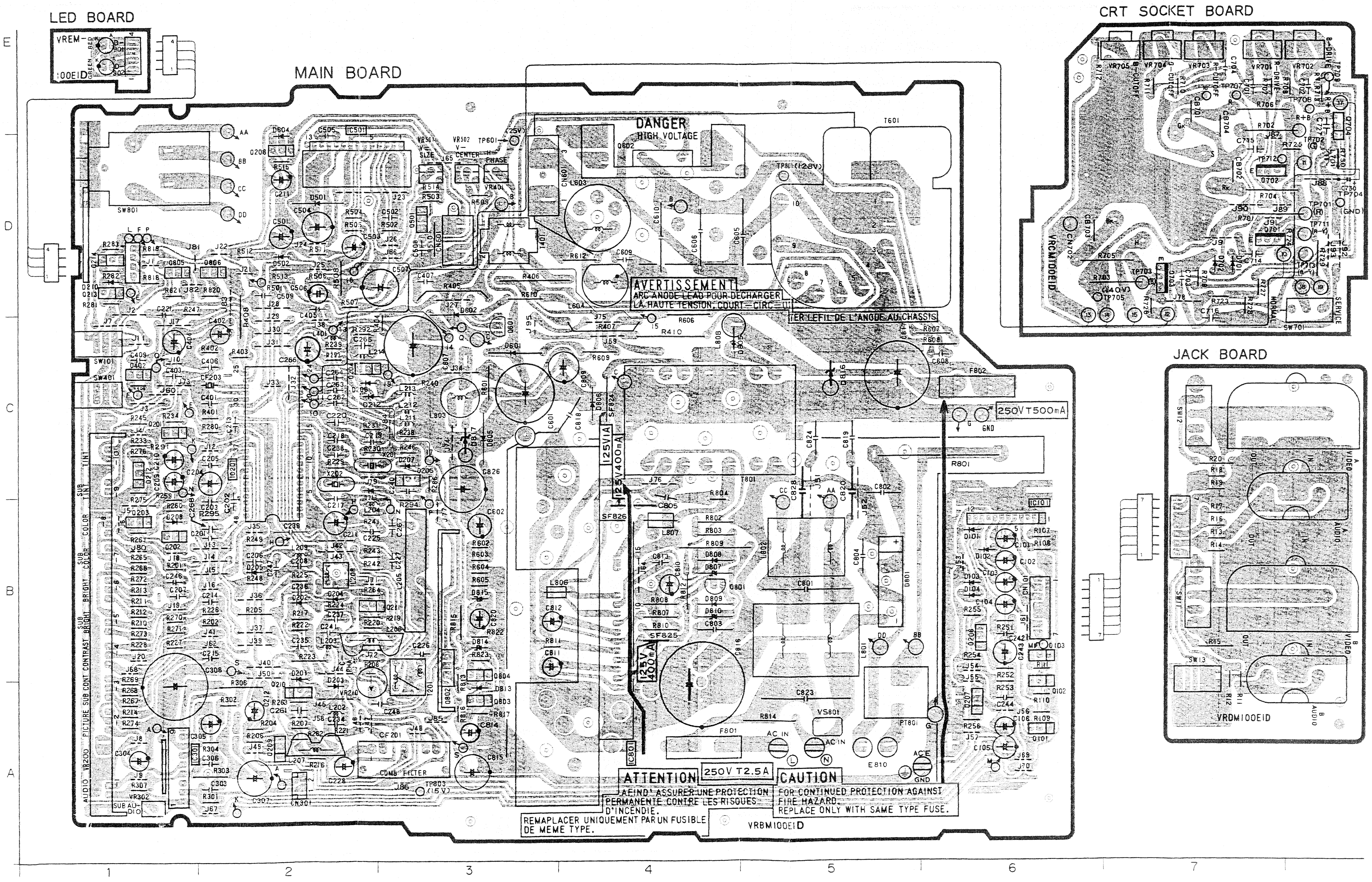
1 2 3 4

A B C D

SCHEMATIC DIAGRAM OF COLOUR VIDEO MONITOR WV-CM1000



CONDUCTOR VIEW OF COLOUR VIDEO MONITOR WV-CM1000


LED BOARD
MAIN BOARD
CRT SOCKET BOARD
JACK BOARD
DANGER
HIGH VOLTAGE
AVERTISSEMENT
ARC ANODE LEAD POUR DECHARGER
LA HAUTE TENSION, COURT-CIRC
TER LEFIL DE L'ANODE AU CHASSIS
250V T500mA
125V 1A
125V 400mA
250V T2.5A
ATTENTION
AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE.
REMAPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE.
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD.
REPLACE ONLY WITH SAME TYPE FUSE.
VRBM100EID
VRCM100EID
VRDM100EID
COMB FILTER
SERVICE
NORMAL
AC IN
GND
E
D
C
B
A
1
2
3
4
5
6
7

Importan
1. Compc
When
2. RTL : R

REPLACEMENT PARTS LIST

Important Notice

1. Components identified by "⚠" mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited

REF. NO.	ORIGINAL PART NO.	NEW PART NO.	DESCRIPTION
		MISCELLNEOUS	
E1	YWHBS308C	YWGTBS2R5A	AC power cord for WV-CM1000/B
		MAIN BOARD	
PCB1	YWVKBM100E1A	YWVKBM100E1Y	Printed Circuit Board Ass'y
D816	————	YWEQB1150	Diode
D817	————	YWEQB1025	Diode
R221	ERDS2TJ681	ERDS2TJ221	Carbon 220 ohms 1/4 W
R230	ERDS2TJ822	ERDS2TJ223	Carbon 22K ohms 1/4 W
R231	ERDS2TJ103	ERDS2TJ333	Carbon 33K ohms 1/4 W
R235 - 237	ERDS2TJ331	————	Carbon 330 ohms 1/4 W
R259	ERDS2TJ472	ERDS2TJ561	Carbon 560 ohms 1/4 W
R261	ERDS2TJ104	ERDS2TJ153	Carbon 15K ohms 1/4 W
R265	ERDS2TJ183	ERDS2TJ103	Carbon 10K ohms 1/4 W
R269	ERDS2TJ223	ERDS2TJ183	Carbon 18K ohms 1/4 W
R295	————	ERDS2TJ152	Carbon 1.5K ohms 1/4 W
R306	ERQ12AJ110	ERQ12AJ240	Fuse Resistor 24 ohms 1/2 W
R509	ERDS2TJ102	ERDS2TJ391	Carbon 390 ohms 1/4 W
R602	ERDS2TJ273	ERDS2TJ243	Carbon 24K ohms 1/4 W
R610, 812	ERD2FCG100P	ERD2FCG100P	Fuse Resistor 10 ohms 1/4W
R809	ERX3SJ1R0P	ERX3SJ2R2	Metal 2.2 ohms 3W
VR501	EVND2AA03BQ4	EVND2AA03B15	Variable Reisitor 100K ohms
C202	ECEA1HU100	ECQV1H474JZ	Plastic 0.47μF 50V
C215	ECKF1H561KB	ECKF1H331KB	Ceramic 330PF 50V
C220	ECEA1HU010	ECQM1H104JZ	Plastic 0.1μF 50V
C233	ECCF1H470JC	————	Ceramic 47PF 50V
C268	————	ECCF1H101JC	Ceramic 100PF 50V
C305	ECEA1HU100	ECEA1HS3R3	Electrolytic 3.3μF 50V
C405	ECKF1H561KB	ECKF1H331KB	Ceramic 330μF 50V
C408	ECKD2H103KB	————	Ceramic 0.01μF 500V
C605	ECWH12H332KR	ECWH12H392JR	Plastic 3900PF 50V
C606	ECWH12H222KR	ECWH12H182JR	Plastic 1800PF 50V
C808	ECEA2VG470S	————	Electrolytic 47μF 350V
C809	ECEA1ES221	ECEA1EFE271L	Electrolytic 270μF 25V
C811	ECSF1VZ475	ECEA1HGE4R7	Electrolytic 4.7μF 50V
C817	ECEA2VG470S	ECEA2CGE221W	Electrolytic 220μF 25V
C819	ECKDWS471KB	ECKDWS102ME	Ceramic 1000PF 400W
C820, 828	————	ECKDWS102ME	Ceramic 1000PF 400W

REF. NO.	ORIGINAL PART NO.	NEW PART NO.	DESCRIPTION
MAIN BOARD			
L208	YWMA8051	YWALCAM7T1	Coil
L402	YWFL9H153J	————	Coil
L805	YWFL11H222J	————	Coil
CN301	YWTSLP02PV2	YWTSLP02PW1	Connector
F824	SSFR3.5AF003	YWSSFR1AF003	Current Fuse
F825, 826	————	YWSSFR0.4A	Current Fuse
CRT SOCKET BOARD			
PCB4	YWVKCM100E1A	YWVKCM100E1Y	Printed Circuit Board Ass'y
R710 - 712	ERDS2TJ182	ERDS2TJ561	Carbon 560 ohms 1/4 W
VR703 - 705	YWH1052A4R7K	YWH1022C6R8K	Variable Resistor 6.8K ohms
C730	————	ECEA1CU330	Electrolytic 33μF 16V